

Interchangeable Lens Digital HD Video Camera Recorder

Operating Guide

E-mount

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HANDYCAM®

AVCHD
Progressive

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

MEMORY STICK™
11M

InfoLITHIUM™ **V**
BATTERY

XC
CLASS C

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call your Sony dealer regarding this product.

Model No. NEX- _____

Serial No. _____

Model No. AC- _____

Serial No. _____



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

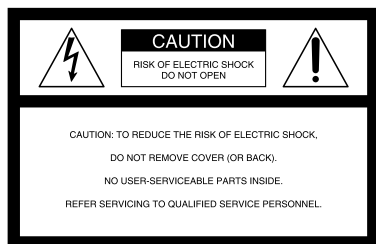
WARNING

To reduce the risk of fire or electric shock,

1) do not expose the unit to rain or moisture.

2) do not place objects filled with liquids, such as vases, on the apparatus.

Do not expose the batteries to excessive heat such as sunshine, fire or the like.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS.

DANGER - TO REDUCE THE RISK OF FIRE
OR ELECTRIC SHOCK,
CAREFULLY FOLLOW THESE
INSTRUCTIONS.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

Representative plug of power supply cord of countries/regions around the world.



A Type
(American
Type)



B Type
(British Type)



BF Type
(British Type)



B3 Type
(British Type)



C Type
(CEE Type)



SE Type
(CEE Type)



O Type
(Ocean Type)

The representative supply voltage and plug type are described in this chart.

Depend on an area, Different type of plug and supply voltage are used.

Attention: Power cord meeting demands from each country shall be used.

– For only the United States

Use a UL Listed, 1.5-3 m (5-10 ft.), Type SPT-2 or NISPT-2, AWG no. 18 power supply cord, rated for 125 V 7 A, with a NEMA 1-15P plug rated for 125 V 15 A.”

Europe

Countries/regions	Voltage	Frequency (Hz)	Plug type
Austria	230	50	C
Belgium	230	50	C
Czech	220	50	C
Denmark	230	50	C
Finland	230	50	C
France	230	50	C
Germany	230	50	C
Greece	220	50	C
Hungary	220	50	C
Iceland	230	50	C
Ireland	230	50	C/BF
Italy	220	50	C
Luxemburg	230	50	C
Netherlands	230	50	C
Norway	230	50	C
Poland	220	50	C
Portugal	230	50	C
Romania	220	50	C
Russia	220	50	C
Slovak	220	50	C
Spain	127/230	50	C
Sweden	230	50	C
Switzerland	230	50	C
UK	240	50	BF

Asia

Countries/regions	Voltage	Frequency (Hz)	Plug type
China	220	50	A
Hong Kong	200/220	50	BF
India	230/240	50	C
Indonesia	127/230	50	C
Japan	100	50/60	A
Korea (rep)	220	60	C
Malaysia	240	50	BF
Philippines	220/230	60	A/C
Singapore	230	50	BF
Taiwan	110	60	A
Thailand	220	50	C/BF

Countries/regions	Voltage	Frequency (Hz)	Plug type
Vietnam	220	50	A/C

Oceania

Countries/regions	Voltage	Frequency (Hz)	Plug type
Australia	240	50	O
New Zealand	230/240	50	O

North America

Countries/regions	Voltage	Frequency (Hz)	Plug type
Canada	120	60	A
USA	120	60	A

Central America

Countries/regions	Voltage	Frequency (Hz)	Plug type
Bahamas	120/240	60	A
Costa Rica	110	60	A
Cuba	110/220	60	A/C
Dominican (rep)	110	60	A
El Salvador	110	60	A
Guatemala	120	60	A
Honduras	110	60	A
Jamaica	110	50	A
Mexico	120/127	60	A
Nicaragua	120/240	60	A
Panama	110/220	60	A

South America

Countries/regions	Voltage	Frequency (Hz)	Plug type
Argentina	220	50	C/BF/O
Brazil	127/220	60	A/C
Chile	220	50	C
Colombia	120	60	A
Peru	220	60	A/C
Venezuela	120	60	A

Middle East

Countries/regions	Voltage	Frequency (Hz)	Plug type
Iran	220	50	C/BF
Iraq	220	50	C/BF
Israel	230	50	C
Saudi Arabia	127/220	50	A/C/BF
Turkey	220	50	C
UAE	240	50	C/BF

Africa

Countries/regions	Voltage	Frequency (Hz)	Plug type
Algeria	127/220	50	C
Congo (dem)	220	50	C
Egypt	220	50	C
Ethiopia	220	50	C
Kenya	240	50	C/BF
Nigeria	230	50	C/BF
South Africa	220/230	50	C/BF
Tanzania	230	50	C/BF
Tunisia	220	50	C

Read this first

Before operating the unit, please read this manual thoroughly, and retain it for future reference.

CAUTION

Battery pack

If the battery pack is mishandled, the battery pack can burst, cause a fire or even chemical burns. Observe the following cautions.

- Do not disassemble.
- Do not crush and do not expose the battery pack to any shock or force such as hammering, dropping or stepping on it.
- Do not short circuit and do not allow metal objects to come into contact with the battery terminals.
- Do not expose to high temperature above 60°C (140°F) such as in direct sunlight or in a car parked in the sun.
- Do not incinerate or dispose of in fire.
- Do not handle damaged or leaking lithium ion batteries.
- Be sure to charge the battery pack using a genuine Sony battery charger or a device that can charge the battery pack.
- Keep the battery pack out of the reach of small children.
- Keep the battery pack dry.
- Replace only with the same or equivalent type recommended by Sony.
- Dispose of used battery packs promptly as described in the instructions.

Replace the battery with the specified type only. Otherwise, fire or injury may result.

AC Adaptor

Do not use the AC Adaptor placed in a narrow space, such as between a wall and furniture.

Use the nearby wall outlet (wall socket) when using the AC Adaptor. Disconnect the AC Adaptor from the wall outlet (wall

socket) immediately if any malfunction occurs while using the apparatus.

Note on the power cord (mains lead)

The power cord (mains lead) is designed specifically for use with this camcorder only, and should not be used with other electrical equipment.

Even if your camcorder is turned off, AC power source (mains) is still supplied to it while connected to the wall outlet (wall socket) via the AC Adaptor.

Excessive sound pressure from earphones and headphones cause hearing loss.

For customers in the U.S.A. and CANADA

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.



For more information regarding recycling of rechargeable batteries, call toll free 1-800-822- 8837, or visit <http://www.rbrc.org/>

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

Battery pack and mount adaptor

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

For the customers in the U.S.A.

UL is an internationally recognized safety organization.

The UL Mark on the product means it has been UL Listed.

If you have any questions about this product, you may call:
Sony Customer Information Center 1-800-222-SONY (7669).

The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY

Model No.: NEX-VG900

Responsible Party: Sony Electronics Inc.

Address: 16530 Via Esprillo, San Diego, CA 92127 U.S.A.

Telephone No.: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

Trade Name: SONY

Model No.: NEX-VG900E

Responsible Party: Sony Electronics Inc.

Address: 16530 Via Esprillo, San Diego, CA 92127 U.S.A.

Telephone No.: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the

equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For the State of California , USA only

Perchlorate Material – special handling, may apply,

See

www.dtsc.ca.gov/hazardouswaste/perchlorate

Perchlorate Material: Lithium battery contains perchlorate.

For Customers in EUROPE

Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

ATTENTION

The electromagnetic fields at the specific frequencies may influence the picture and sound of this unit.

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway

(fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.



Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.



Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)

This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste.

On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead.

By ensuring these batteries are disposed of correctly, you will help prevent potentially

negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.

In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.

For all other batteries, please view the section on how to remove the battery from the product safely. Hand the battery over to the applicable collection point for the recycling of waste batteries.

For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Notice for customers in the United Kingdom

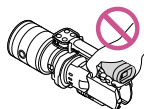
A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with an  or ) must be used. If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

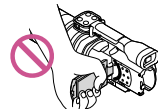
Using the camcorder

- Do not hold the camcorder by the following parts, and also do not hold the camcorder by the jack covers.

Viewfinder



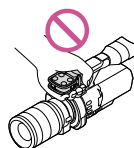
LCD Screen



Lens



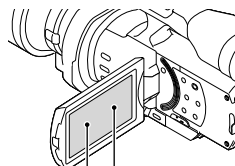
Built-in microphone



- The camcorder is not dustproofed, dripproofed or waterproofed. See "Precautions" (p. 66).

Menu items, LCD panel, viewfinder and lens

- A menu item that is grayed out is not available under the current recording or playback conditions.
- The LCD screen and viewfinder are manufactured using extremely high-precision technology, so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue, or green in color) that appear constantly on the LCD screen. These points are normal results of the manufacturing process and do not affect the recording in any way.



Black points

White, red, blue or green points

- Do not record the sun or leave the camcorder under the sun for a long time. The inside of the camcorder may be damaged. If sunlight is focused on a nearby object, it may cause a fire. When you must place the camcorder under direct sunlight, attach the lens cap.
- Exposing the LCD screen, the viewfinder or the lens to direct sunlight for long periods of time may cause malfunctions.
- Do not aim at the sun. Doing so might cause your camcorder to malfunction. Take images of the sun only in low light conditions, such as at dusk.
- Do not look at the sun or a strong light through a removed lens. This may cause irreversible damage to your eyes.

About language setting

- The on-screen displays in each local language are used for illustrating the operating procedures. Change the screen language before using the camcorder if necessary (p. 26).

On recording

- To ensure stable operation of the memory card, it is recommended to format the memory card with your camcorder before the first use. Formatting the memory card will erase all the data stored on it and the data will be irrecoverable. Save your important data on your PC etc.
- Before starting to record, test the recording function to make sure the image and sound are recorded without any problems.
- Compensation for the contents of recordings cannot be provided, even if recording or playback is not possible due to a malfunction of the camcorder, memory card, etc.
- To view recordings made on the camcorder on a TV, an NTSC-based TV is required for the NEX-VG900, and a PAL-based TV is required for the NEX-VG900E.
- Television programs, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the copyright laws.
- Use the camcorder in accordance with local regulations.

Notes on playing back

- You may not be able to play back normally images recorded on your camcorder with other devices. Also, you may not be able to play back images recorded on other devices with your camcorder.
- Standard (STD) image quality movies recorded on SD memory cards cannot be played on AV equipment of other manufacturers.

DVD media recorded with HD image quality (high definition)

- DVD media recorded with high definition image quality (HD) can be played back with devices that are compatible with the AVCHD standard. You cannot play discs recorded with high definition image quality (HD) with DVD players/recorders as they are not compatible with the AVCHD format. If you insert a disc recorded with the AVCHD format (high definition image quality (HD)) into a DVD player/recorder, you may not be able to eject the disc.

Save all your recorded image data

- To prevent your image data from being lost, save all your recorded images on external media periodically. To save images on your computer, see page 45, and to save images on external devices, see page 52.
- The type of discs or media on which the images can be saved depend on the [ REC Mode] selected when the images were recorded. Movies recorded in [60p Quality **PS**] (NEX-VG900), [50p Quality **PS**] (NEX-VG900E) or [Highest Quality **FX**] can be saved on external media or on Blu-ray discs (p. 52).

Notes on battery pack/AC Adaptor

- Be sure to remove the battery pack or the AC Adaptor after turning off the camcorder.
- Disconnect the AC Adaptor from the camcorder, holding both the camcorder and the DC plug.

Note on the camcorder/battery pack temperature

- When the temperature of the camcorder or battery pack becomes extremely high or extremely low, you may not be able to record or play back on the camcorder, due to the protection features of the camcorder being activated in such situations. In this case, an indicator appears on the LCD screen or on the viewfinder.

When the camcorder is connected to a computer or accessories

- Do not try to format the memory card of the camcorder using a computer. If you do so, your camcorder may not operate correctly.
- When connecting the camcorder to another device with communication cables, be sure to insert the connector plug in the correct way. Pushing the plug forcibly into the terminal will damage the terminal and may result in a malfunction of the camcorder.

If you cannot record/play back images, perform [Format]

- If you repeat recording/deleting images for a long time, fragmentation of data occurs on the memory card. Images cannot be saved or recorded. In such a case, first save your images onto a PC, etc., then perform [Format] by touching  (MENU) → [Setup] →  (Media Settings) → [Format] →  → .

Notes on optional accessories

- We recommend using genuine Sony accessories.
- Genuine Sony accessories may not be available in some countries/regions.

About this manual, illustrations and on-screen displays

- The example images used in this manual for illustration purposes are captured using a digital still camera, and therefore may appear different from images and screen indicators that actually appear on your camcorder. And, the

illustrations of your camcorder and its screen indication are exaggerated or simplified for understandability.

- In this manual, the DVD disc recorded with high definition image quality (HD) is called AVCHD recording disc.
- Design and specifications of your camcorder and accessories are subject to change without notice.
- The screen indicators in this manual are those of NEX-VG900.

Notes on use

- Do not do any of the following. Otherwise, the memory card may be damaged, recorded images may be impossible to play back or may be lost, or other malfunctions could occur.
 - ejecting the memory card when the access lamp (p. 30) is lit or flashing
 - removing the battery pack or AC Adaptor from the camcorder, or applying mechanical shock or vibration to the camcorder when the  (Movie)/ (Photo) lamps (p. 33) or the access lamp (p. 30) are lit or flashing
- When using a shoulder belt (sold separately), do not crash the camcorder against an object.

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Getting Started

Step 1: Checking supplied items

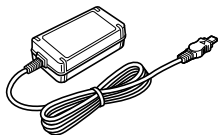
Make sure that you have following items supplied with your camcorder.

The numbers in () are the supplied quantity.

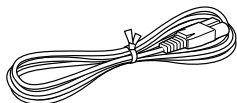
- This camcorder (1)
- Body cap (attached to the camcorder) (1) (p. 20)



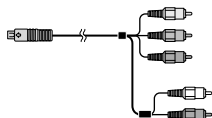
- AC Adaptor (1) (p. 17)



- Power cord (mains lead) (1) (p. 17)



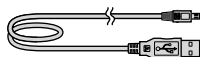
- Component A/V Cable (1) (p. 41)



- A/V connecting cable (1) (p. 41)



- USB cable (1) (p. 52)



- Wireless Remote Commander (RMT-835) (1)

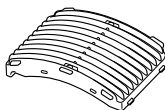


A button-type lithium battery is already installed.

- Rechargeable battery pack (NP-FV70) (1) (p. 17)



- Battery Cover (1) (p. 16)



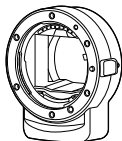
- Wind Screen (1) (p. 16)



- Large eyecup (1) (p. 29)



- Mount adaptor (LA-EA3) (1) (p. 23)

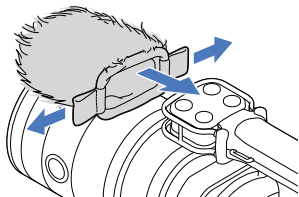


- CD-ROM “Handycam” Application Software (1) (p. 46)
 - “PlayMemories Home” (software, including “PlayMemories Home Help Guide”)
 - Image Data Converter (RAW development software)
 - “Handycam” Handbook (PDF)
- Operating Guide (This manual) (1)

Step 2: Attaching the supplied accessories

Attaching the Wind Screen

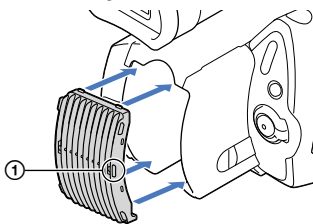
Use the Wind Screen when you want to reduce the wind noise recorded by the microphone. Attach the Wind Screen with the Sony logo facing down.



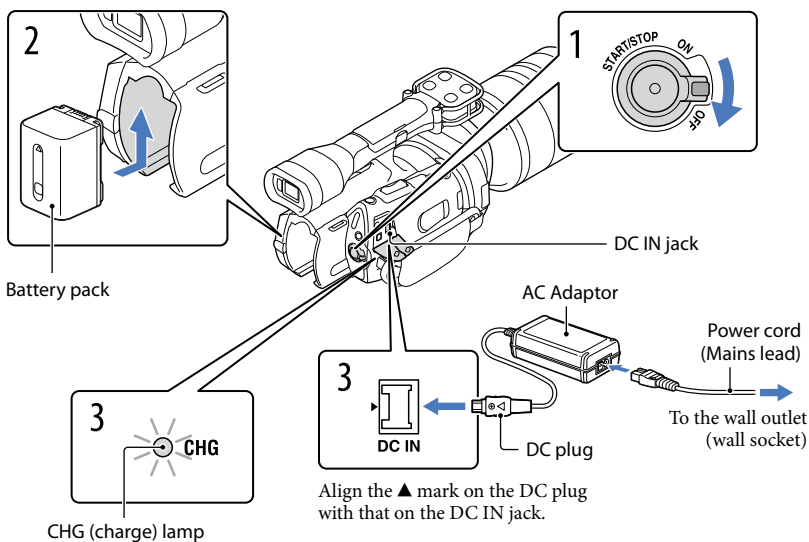
Attaching the battery cover

Attach the battery cover after attaching the battery pack.

Attach the battery cover with the projecting part (1) facing as shown in the illustration.



Step 3: Charging the battery pack



You can charge the “InfoLITHIUM” battery pack (V series) after attaching it to your camcorder.

⚡ Notes

- You cannot attach any “InfoLITHIUM” battery pack other than the V series to your camcorder.
- You cannot attach the “InfoLITHIUM” battery pack NP-FV30/FV50, even though they are V series.

- 1 Slide the POWER switch to OFF (the default setting).
- 2 Attach the battery pack by sliding it in the direction of the arrow until it clicks.
- 3 Connect the AC Adaptor and the power cord (mains lead) to your camcorder and the wall outlet (wall socket).

The CHG (charge) lamp lights up and charging starts. The CHG (charge) lamp turns off when the battery pack is fully charged.

4 When the battery is charged, disconnect the AC Adaptor from the DC IN jack of your camcorder.

Charging time

Approximate time (min.) required when you fully charge a fully discharged battery pack.

Battery pack	Charging time
NP-FV70 (supplied)	195
NP-FV100	390

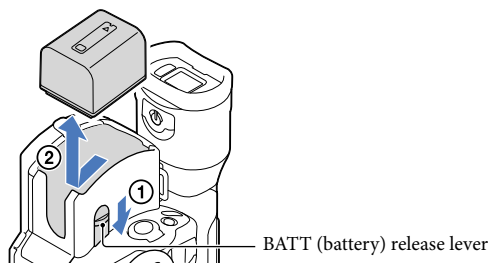
- The charging times shown in the table above are measured when charging the camcorder at a temperature of 25 °C (77 °F). It is recommended that you charge the battery in a temperature range of 10 °C to 30 °C (50 °F to 86 °F).

Tips

- See page 64 on recording and playing time.
- When your camcorder is on, you can check the approximate amount of remaining battery power with the remaining battery indicator at the upper right on the LCD screen.

To remove the battery pack

Slide the POWER switch to OFF. Slide the BATT (battery) release lever (①) and remove the battery pack (②).



To use a wall outlet (wall socket) as a power source

Make the same connections as “Step 3: Charging the battery pack” (p. 17). Even if the battery pack is attached, the battery pack is not discharged.

Notes on attaching/detaching of the power source

- When you remove the battery pack or disconnect the AC Adaptor, turn the camcorder off and make sure that the  (Movie)/ (Photo) lamps (p. 33), the access lamp (p. 30) are turned off.
- The CHG (charge) lamp flashes during charging under the following conditions:
 - The battery pack is not attached correctly.
 - The battery pack is damaged.
 - The temperature of the battery pack is low.
Remove the battery pack from your camcorder and put it in a warm place.
 - The temperature of the battery pack is high.
Remove the battery pack from your camcorder and put it in a cool place.
- In the default setting, the power turns off automatically if you leave your camcorder without any operation for about 5 minutes, to save battery power ([A. Shut Off]).

Notes on the AC Adaptor

- Use the nearby wall outlet (wall socket) when using the AC Adaptor. Disconnect the AC Adaptor from the wall outlet (wall socket) immediately if any malfunction occurs while using your camcorder.
- Do not use the AC Adaptor placed in a narrow space, such as between a wall and furniture.
- Do not short-circuit the DC plug of the AC Adaptor or battery terminal with any metallic objects. This may cause a malfunction.

Note on the power cord (Mains lead)

The power cord (Mains lead) is designed specifically for use with this camcorder only, and should not be used with other electrical equipment.

Charging the battery pack abroad

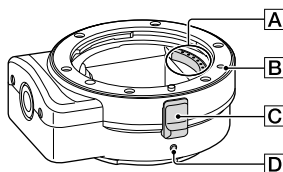
You can charge the battery pack in any countries/regions using the AC Adaptor supplied with your camcorder within the AC 100 V - 240 V, 50 Hz/60 Hz range.

- Do not use an electronic voltage transformer.

Step 4: Attaching the lens

This manual explains how to attach the supplied mount adaptor and a lens (SAL2470Z lens (sold separately) is used for example purposes).

When you use an E-mount lens, refer to the instruction manual supplied with your lens.



A Lens contacts*

B Mounting mark (orange)

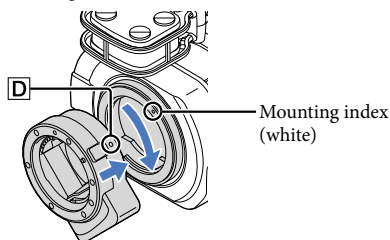
C Lens release

D Mounting mark (white)

* Do not touch or dirty the lens contacts.

To attach the supplied mount adaptor

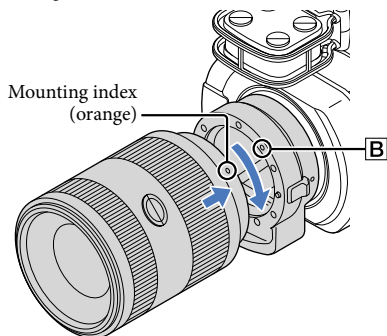
- ① Remove the body cap from the camcorder body, and the mount adaptor's front and rear caps.
 - Turn the mount adaptor's caps counterclockwise to remove them.
- ② Align the mounting mark **D** on the mount adaptor with the mounting index (white) on the camcorder. Insert the mount adaptor into the camcorder's mount and turn it clockwise until it locks in place.
 - Do not press the lens release button on the camcorder while mounting the mount adaptor as the mount adaptor will not couple properly.
 - Do not insert the mount adaptor at an angle.



To attach the lens

Align the mounting index (orange) on the lens barrel with the mounting mark **[B]** on the mount adaptor. Insert the lens into the mount adaptor's mount and turn it clockwise until it locks in place.

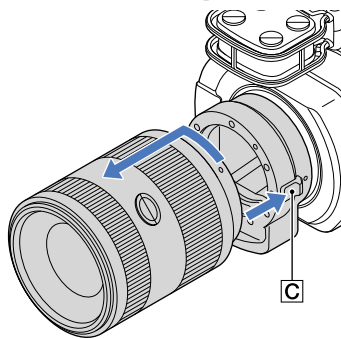
- Do not press the lens release on the mount adaptor while mounting the lens as it will not couple properly.
- Do not insert the lens at an angle.



Removing the lens

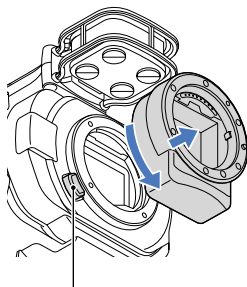
To remove the lens

Hold down the lens release **[C]** on the mount adaptor and turn the lens counterclockwise until it stops. Carefully lift the lens out of the mount adaptor's mount.



To remove the mount adaptor

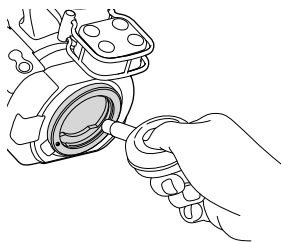
Hold down the lens release button on the camcorder body and turn the mount adaptor counterclockwise until it stops. Carefully lift the mount adaptor out of the camcorder's mount.



Lens release button

If dust or debris adheres on the image sensor

Turn off the camcorder and detach the lens. Clean the image sensor and the surrounding area using a blower (sold separately), and then reattach the lens.



Notes

- Do not use a spray blower because it may scatter water droplets inside the camcorder body.
- Do not put the tip of a blower into the cavity beyond the mount, so that the tip of the blower does not touch the image sensor.
- Hold the camcorder's face downward to prevent the dust from resettling in the camcorder.
- Do not apply a mechanical shock to the camcorder during cleaning.
- If you cannot clean the image sensor by the above procedure, consult your Sony dealer or local authorized Sony service facility.

Mount Adaptor

The available functions differ depending on the Mount Adaptor type.

Functions	LA-EA1**	LA-EA2**	LA-EA3
Autofocus	Available with SAM/SSM lens only*	Available	Available with SAM/SSM lens only*
AF system	Contrast AF	Phase-detection AF	Contrast AF
AF/MF Select	Switchable on the lens	SAM/SSM lenses: switchable on the lens Other lenses: switchable on the FOCUS button	Switchable on the lens
Autofocus Mode (Only photo mode)	Single	Single/Continuous	Single

* With LA-EA1, LA-EA3, autofocus speed with an A-mount lens attached will be slower compared to an E-mount lens. (When an A-mount lens is attached, the autofocus speed will be about 2 seconds to 7 seconds, when shooting under Sony measurement condition. The speed may vary depending on the subject, ambient light, etc.)

** LA-EA1 and LA-EA2 are sold separately.

Notes

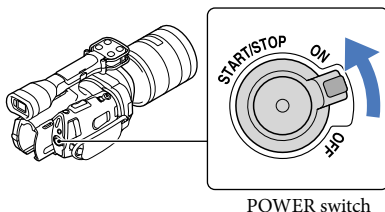
- Some lenses may not be usable or may have limited functionality. Check the dedicated support web site or consult your local authorized Sony service facility on compatible lenses.
- The sound of the lens and the camera in operation may be recorded during movie recording. You can avoid this by setting Audio Rec Level to minimum. Touch **MENU** (MENU) → [Camera/Mic] → [ (Microphone)] → [Audio Rec Level].
- It may take a long time or may be difficult for the camera to focus, depending on the lens used or the subject.

To attach the lens hood

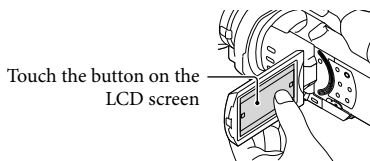
Refer to the instruction manual supplied with your lens.

Step 5: Turning the power on, and setting the date and time

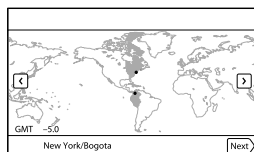
- 1 Slide the POWER switch to ON while pressing the green button.



- 2 Select the desired language, then touch [Next].



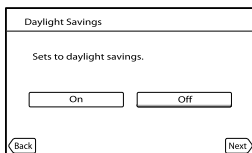
- 3 Select the desired geographical area with **<** / **>**, then touch [Next].



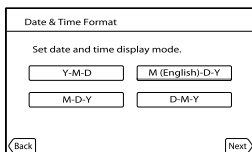
- To set the date and time again, touch **MENU** (MENU) → [Setup] → [⌚ (⌚ Clock Settings)] → [Date & Time Setting] → [Date & Time]. When an item is not on the screen, touch **^** / **v** until the item appears.

4 Set [Daylight Savings] or [Summer Time], then touch [Next].

- If you set [Daylight Savings] or [Summer Time] to [On], the clock advances 1 hour.

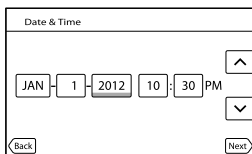


5 Select the date format, then touch [Next].



6 Select the date and time, touch / to set the value, then touch [Next] → *.

- * The confirmation screen appears only when you set the clock for the first time.



The clock starts.

Notes

- The date and time does not appear during recording, but they are automatically recorded on the memory card, and can be displayed during playback. To display the date and time, touch (MENU) → [Setup] → (Playback Settings) → [Data Code] → [Date/Time] → .
- You can turn off the operation beeps by touching (MENU) → [Setup] → (General Settings) → [Beep] → [Off] → .
- If the button you touch does not react correctly, calibrate the touch panel.

To turn off the power

Slide the POWER switch to OFF.

The  (Movie) lamp flashes for a few seconds and the camcorder is turned off.

Changing the language setting

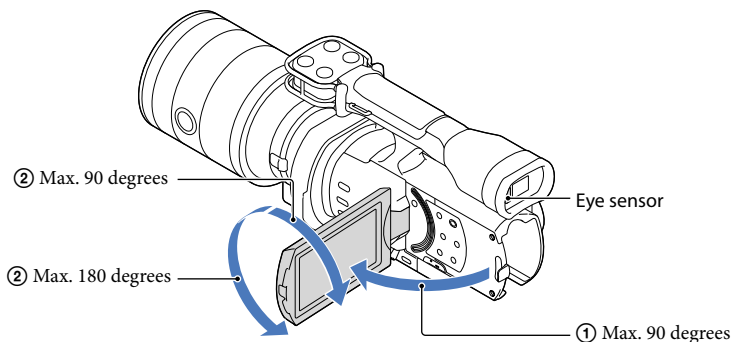
You can change the on-screen displays to show messages in a specified language.

Touch **MENU** (MENU) → [Setup] → [ ( General Settings)] → [Language Setting] → a desired language → **OK** → **X** → **X**.

Step 6: Making setting adjustments before recording

The LCD panel

Open the LCD panel 90 degrees to the camcorder (①), and then adjust the angle (②).



Tips

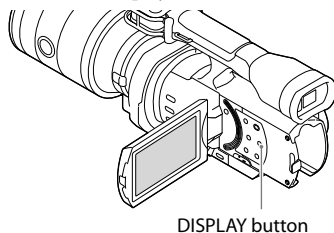
- Images are displayed on the viewfinder or the LCD screen.
- As your eye moves closer to the viewfinder when the LCD screen is closed, the screen display changes to the viewfinder. You can set the camcorder so that the screen display changes to the viewfinder as your eye moves closer to the viewfinder, even though the LCD screen is open.
- You can adjust the brightness of the LCD screen with [LCD Brightness].

Changing the display on the LCD screen

Press DISPLAY to cycle the screen display in the following order:

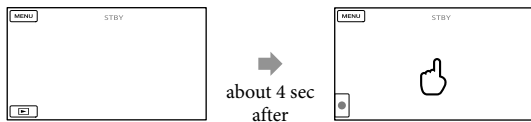
Recording: Detailed display → simple display → minimum display

Playing: Detailed display → minimum display



Tips

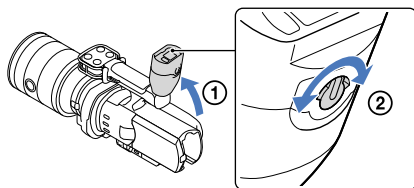
- In the default setting, the screen display changes to the simple display after about 4 seconds ([Display Setting]). The display changes to the detailed display when you touch anywhere on the screen except the buttons on the LCD screen so that you can use items.



The display becomes dark after a certain period when you use the viewfinder.

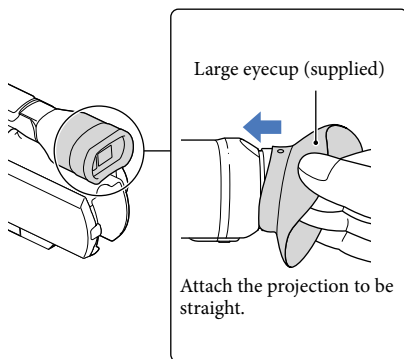
The viewfinder

When you record while viewing through the viewfinder, keep your eye close to the viewfinder, while the LCD screen is closed. If the indications in the viewfinder appear blurred, adjust the viewfinder lens adjustment lever located beneath the viewfinder. If [VF/Panel] is set to [Auto], as your eye moves closer to the viewfinder, the eye sensor detects it and the display changes to the viewfinder even though the LCD screen is open. If the eye sensor cannot detect it, the display remains on the LCD screen.



If the image is not clear in the viewfinder

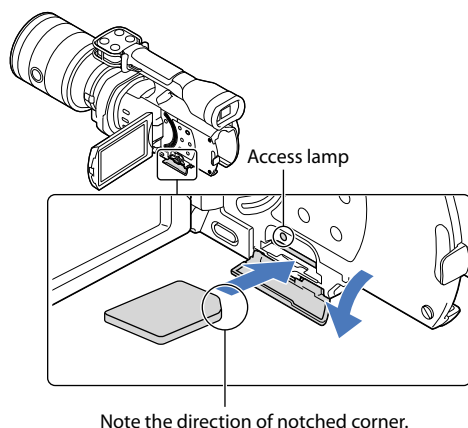
If you cannot see the picture in the viewfinder clearly under bright circumstances, use the supplied large eyecup. To attach the large eyecup, stretch it slightly and align it with the eyecup groove in the viewfinder. You can attach the large eyecup facing either the right or left side.



Notes

- Do not remove the pre-attached eyecup.

Step 7: Inserting a memory card



- 1 Open the cover, and insert the memory card with the notched edge in the direction as illustrated until it clicks.

The [Preparing image database file. Please wait.] screen appears if you insert a new memory card. Wait until the screen disappears.

- 2 Close the cover.

⚡ Notes

- If [Failed to create a new Image Database File. It may be possible that there is not enough free space.] is displayed, format the memory card.
- Confirm the direction of the memory card. If you forcibly insert the memory card in the wrong direction, the memory card, memory card slot, or image data may be damaged.
- Do not open the cover during recording.
- When inserting or ejecting the memory card, be careful so that the memory card does not pop out and drop.

To eject the memory card

Open the cover and lightly push the memory card in once.

Types of memory card you can use with your camcorder

	SD Speed Class	Capacity (operation verified)	Described in this manual
“Memory Stick PRO Duo” media (Mark2)	—	32 GB	“Memory Stick PRO Duo” media
“Memory Stick PRO-HG Duo” media			
“Memory Stick XC-HG Duo” media		64 GB	
SD memory card			
SDHC memory card			
SDXC memory card	Class 4 or faster		

- Operation with all memory cards is not assured.
- "Memory Stick PRO Duo" media, half the size of "Memory Stick", or standard size SD cards can be used for this camcorder.
- Do not attach a label or the like on memory card or memory card adaptor. Doing so may cause a malfunction.

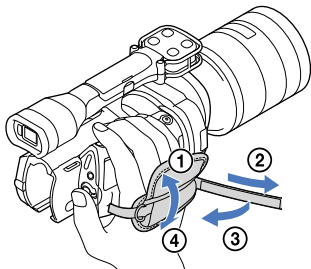
Notes

- A MultiMediaCard cannot be used with this camcorder.
 - Movies recorded on "Memory Stick XC-HG Duo" media or SDXC memory cards cannot be imported to or played back on computers or AV devices not supporting the exFAT* file system by connecting the camcorder to these devices with the USB cable. Confirm in advance that the connecting equipment is supporting the exFAT system. If you connect an equipment not supporting the exFAT system and the format screen appears, do not perform the format. All the data recorded will be lost.
- * The exFAT is a file system that is used for "Memory Stick XC-HG Duo" media and SDXC memory cards.

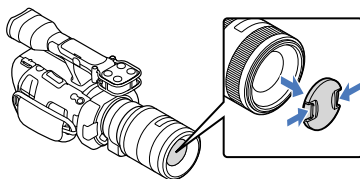
Recording

In the default setting, movies are recorded with high definition image quality (HD).

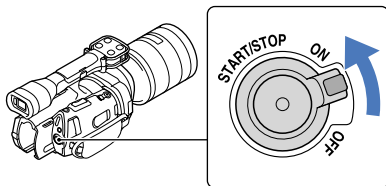
- 1 Fasten the grip belt.



- 2 To remove the lens cap, push the sliders on both sides of the cap.



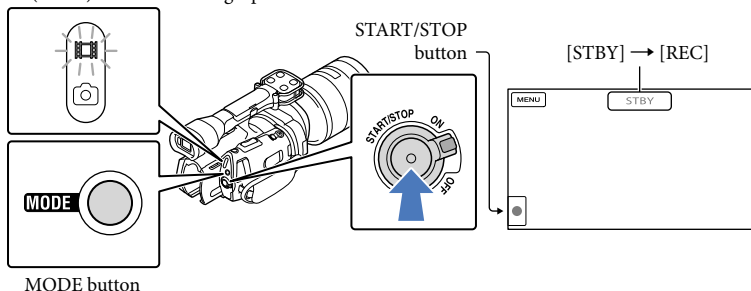
- 3 Slide the POWER switch to ON while pressing the green button.
Your camcorder is turned on.



Recording movies

 (Movie): When recording a movie

 (Photo): When recording a photo



1 Press MODE to turn on the  (Movie) lamp.

2 Press START/STOP to start recording.

The recording lamp lights up during recording (p. 75).

To stop recording, press START/STOP again.

Notes

- The maximum continuous recordable time of movies is about 13 hours.
- When a movie file exceeds 2 GB, the next movie file is created automatically.
- It will take several seconds until you can start recording after you turn on the camcorder. You cannot operate your camcorder during this time.
- The following states will be indicated if data is still being written onto the recording media after recording has finished. During this time, do not apply shock or vibration to the camcorder, or remove the battery or AC Adaptor.
 - Access lamp (p. 30) is lit or flashing
 - The media icon in the upper right of the LCD screen is flashing
- Hold the lens with your left hand to support the camera during recording (when you do not use a tripod). Make sure that your fingers are not touching the microphone.

Tips

- See page 65 on the recordable time of movies.
- The IRIS, Shutter Speed, Gain and Exposure are set to automatic adjustment when PROGRAM AE is pressed.
- [ SteadyShot] is set to [Standard] in the default setting. Note that if the attached lens does not have an

image stabilizing feature, SteadyShot will not be usable.

- You can capture photos from recorded movies (NEX-VG900).
- You can check the recordable time, estimated remaining capacity, etc., by touching **MENU** (MENU) → [Setup] → [] (Media Settings) → [Media Info].
- The LCD screen of your camcorder can display recording images across the entire screen (full pixel display). However, this may cause slight trimming of the top, bottom, right and left edges of images when played back on a TV which is not compatible with full pixel display. In this case, set [Guide Frame] to [On], and record images using the outer frame displayed on the screen as a guide.

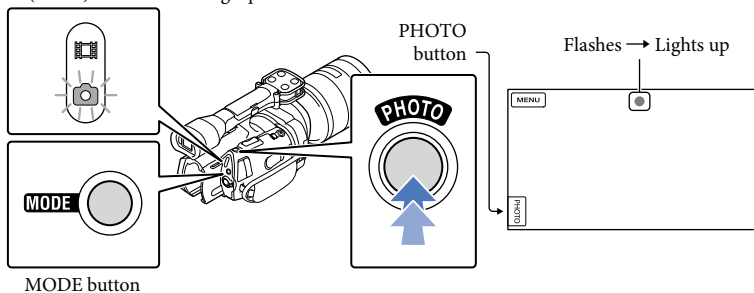
Data code during recording

The recording date, time and condition are recorded automatically on the memory card. They are not displayed during recording. However, you can check them as [Data Code] during playback. To display them, touch **MENU** (MENU) → [Setup] → [] (Playback Settings) → [Data Code] → a desired setting → **OK**.

Shooting photos

 (Movie): When recording a movie

 (Photo): When recording a photo



When  disappears, the photo is recorded.

1 Press **MODE** to turn on the (Photo) lamp.

The LCD screen display switches for photo recording mode.

2 Press **PHOTO** lightly to adjust the focus, then press it fully.

Focus indicator

The focus indicator shows the focusing status by lighting/flashing.

- lit : Focus locked.
- flashing : The camcorder cannot focus on the subject automatically. Either recompose the shot or change the focus setting.

Tips

- See page 65 on the recordable number of photos.
- The IRIS, Shutter Speed, ISO and Exposure are set to automatic adjustment when PROGRAM AE is pressed.
- To change the image size, touch **MENU** (MENU) → [Image Quality/Size] → [ Image Size] → a desired setting → **OK**.
- When [APS-C Size Capture] is set to [Auto], the recordable image size depends on the lens you use.
- You cannot record photos while  is displayed.

Selecting the recording mode

You can change the quality of the image that you record by touching **MENU** (MENU) → [Image Quality/Size] → [ REC Mode].

The types of media that images can be saved on will depend on the recording mode selected.

For details on a save operation using the external devices, see page 52.

Types of media	Recording mode		
	PS*	FX	FH/HQ/LP
On this camcorder			
Memory card	✓	✓	✓
On external devices			
External media (USB storage devices)	✓	✓	✓
Blu-ray discs	✓	✓	✓
AVCHD recording discs	—	—	✓

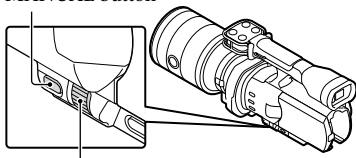
* [PS] can be set only when [ Frame Rate] is set to [60p] (NEX-VG900), [50p] (NEX-VG900E).

Adjusting for shooting conditions

Adjusting Exposure, etc., manually (MANUAL dial)

It is convenient to make manual adjustments using the MANUAL dial, by assigning a menu item ([Exposure]) in the default setting) to the MANUAL button.

MANUAL button



MANUAL dial

How to use the MANUAL dial

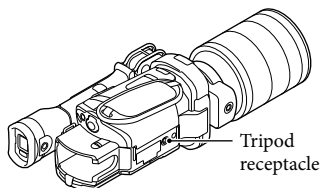
Adjust with MANUAL dial to make the adjustment also when pressing IRIS or SHUTTER SPEED.

To assign a menu item

Press and hold MANUAL for a few seconds to display the [MANUAL Button] screen. Rotate the MANUAL dial to assign an item. You can assign [Exposure], [AE Shift], [WB Color Temp.], [WB B-A], or [WB G-M].

Using a tripod

Attach a tripod (sold separately) to the tripod receptacle using a tripod screw (sold separately, the length of the screw must be less than 5.5 mm (7/32 in.)).



Playback on the camcorder



- The camcorder displays recorded images as an event automatically based on the date and time.

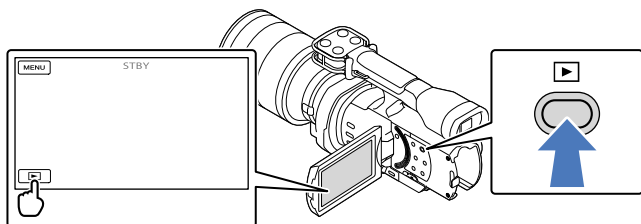
1

Slide the POWER switch to ON while pressing the green button.

Your camcorder is turned on.

2

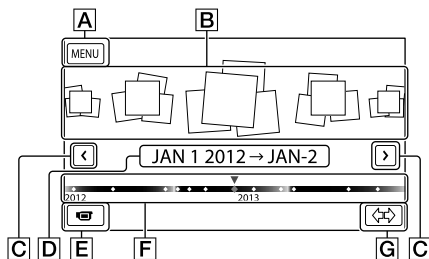
Press  (View Images).



The Event View screen appears after some seconds.

3

Touch  /  to select the desired event (**[B]**).

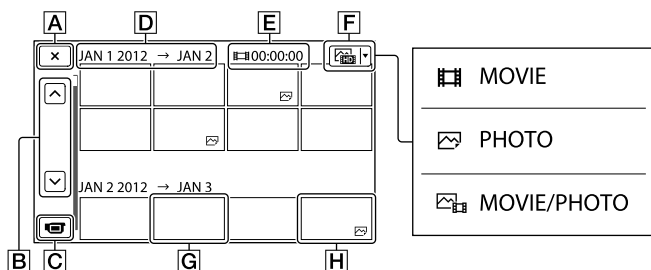


- [A]** To the MENU screen
- [B]** Events
- [C]**  /  : To the previous/next event
- [D]** Event name
- [E]** Change to the movie/photo recording mode
- [F]** Time-line bar
- [G]** Change Event Scale button

The Event Index screen appears when you touch the event that is displayed on the center.

- Touch  (**[G]** Change Event Scale) on the bottom right of the screen so that you can change the time range of the time-line bar from one and a half years to three months, which changes the number of the events that can be displayed on the time-line bar.

4 Touch an image you want to view.



Touch **F** to select the image type to be displayed in the index from [**MOVIE**] (movies only), [**PHOTO**] (photos only), or [**MOVIE/PHOTO**] (movies and photos mixed).

A To go back to the Event View screen

B / : Displays the previous/next page (Touching and holding the button scrolls the index screen.)

C Change to the movie/photo recording mode

D Event title

E Total time of movies in the Event (The total number of still images is displayed when there are still images only)

F Switch Image Type button

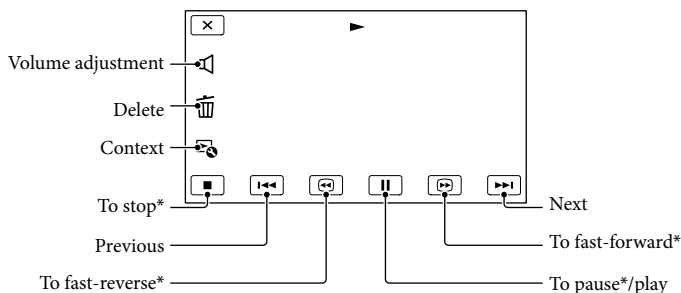
G Movie

H Photo

- appears with the movie or photo that was most recently played or recorded. If you touch the movie or photo with , you can continue playback from the previous time.

Operating the camcorder while playing a movie

You can use the functions shown in the figure below while the camcorder is playing a movie. The figure below will be displayed when you select [MOVIE/PHOTO] (the default setting) or [MOVIE] by touching the Switch Image Type button on the Event Index screen.



* These buttons can be used only when the camcorder is playing a movie.

Notes

- You may not be able to play back the images with other devices than camcorder.

Tips

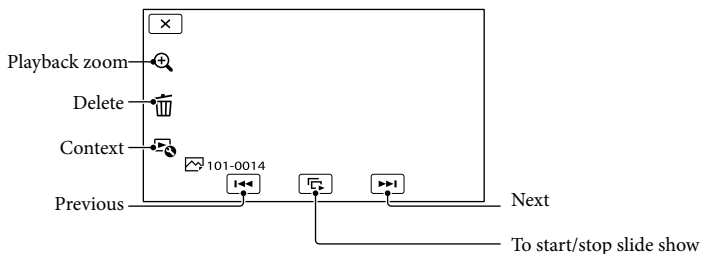
- Touching the button on the playback screen displays functions you can currently use, and allows you to use those functions easily.
- When playback from the selected image reaches the last image, the screen returns to the INDEX screen.
- Touch / during pause to play back movies slowly.
- As you repeat touching / during playback, movies are played as fast as about 5 times → about 10 times → about 30 times → about 60 times.
- The recording date, time, and shooting conditions are recorded automatically during recording. This information is not displayed during recording, but you can display it during playback by touching **MENU** (**MENU**) → [Setup] → (Playback Settings) → [Data Code] → a desired setting → **OK** → .

To adjust the sound volume of movies

While playing back movies, touch → adjust with / → **OK**.

Viewing photos

You can use the functions shown in the figure below while you are viewing photos. The figure below will be displayed when you select [ PHOTO] by touching the Switch Image Type button on the Event Index screen.



Tips

- To repeat Slideshow, touch  → [Slideshow Set].

To see enlarged images

Touch  (Playback zoom) during still image playback. You can adjust the zoom by /. You can also operate this with the zoom lever.

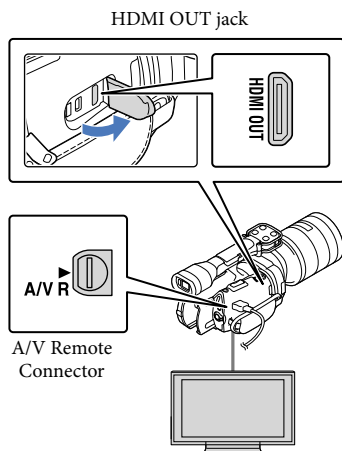
Tips

- You cannot use the playback zoom if you have not selected [ PHOTO] on the index screen.

Playing images on a TV

Connection methods and the image quality (high definition (HD) or standard definition (STD)) viewed on the TV screen differ depending on what type of TV is connected, and the connectors used. You can watch images on your TV screen even while they are being recorded.

Output connectors on the camcorder

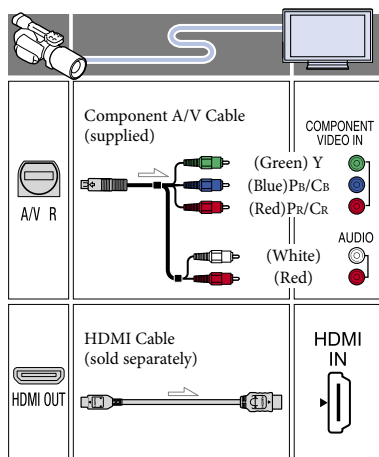


- 1 Switch the input on the TV to the connected jack.
 - Refer to the instruction manuals of the TV.
- 2 Connect the camcorder to a TV.
 - Use the supplied AC Adaptor as the power source (p. 18).
- 3 Play a movie or a photo on the camcorder (p. 37).

List of connection

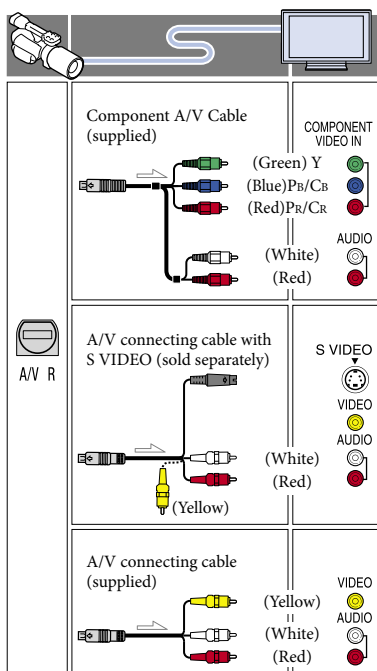
Connecting to a high definition TV

When the recording quality is high definition image quality (HD), the movies are played back in high definition image quality (HD). When the recording quality is standard image quality (STD), the movies are played back in standard definition image quality (STD).



Connecting to a non-high-definition 16:9 (wide) or 4:3 TV

When movies are recorded with high definition image quality (HD), they are played back in standard definition image quality (STD). When movies are recorded with standard image quality (STD), they are played back in standard definition image quality (STD).



When you connect with component A/V cable

- If you connect only component video plugs, audio signals are not output. Connect the white and red plugs to output audio signals.
- Select the [Component] setting for the component input jack you are using. Touch **MENU** (MENU) → [Setup] → [↔ (↔ Connection)] → [Component] → a desired setting → **OK** to make the setting.

When you connect with HDMI cable

- Use an HDMI cable with the HDMI logo.
- Use an HDMI mini connector on one end (for the camcorder), and a plug suitable for connecting your TV on the other end.
- Copyright-protected images are not output from the HDMI OUT jack of your camcorder.

- Some TVs may not function correctly (e.g., no sound or image) with this connection.
- Do not connect the camcorder HDMI OUT jack to an external device HDMI OUT jack, as malfunction may result.
- When the connected device is compatible with 5.1ch surround sound, high definition image quality (HD) movies are output in 5.1ch surround sound automatically. Standard definition image quality (STD) movies are converted to 2ch sound.

To set the aspect ratio according to the connected TV (16:9/4:3)

- Set [TV Type] to [16:9] or [4:3] according to your TV.

When you connect with A/V connecting cable with S VIDEO

- When the S VIDEO plug (S VIDEO channel) is connected, audio signals are not output. To output audio signals, connect the white and red plugs to the audio input jack of your TV.
- This connection produces higher resolution images compared with the A/V connecting cable.

When your TV is monaural (When your TV has only one audio input jack)

- Connect the yellow plug of the A/V connecting cable to the video input jack and connect the white (left channel) or red (right channel) plug to the audio input jack of your TV or VCR.

When connecting to your TV via a VCR

- Connect your camcorder to the LINE IN input on the VCR using the A/V connecting cable. Set the input selector on the VCR to LINE (VIDEO 1, VIDEO 2, etc.).

On "Photo TV HD"

This camcorder is compatible with the "Photo TV HD" standard. "Photo TV HD" allows for highly-detailed, photo-like depiction of subtle textures and colors. By connecting Sony's Photo TV HD-

compatible devices using an HDMI cable* or the component AV cable**, a whole new world of photos can be enjoyed in breathtaking high image quality.

* The TV will automatically switch to the appropriate mode when displaying photos.

** Setup of the TV will be necessary. Please refer to the instructions of your Photo TV HD-compatible TV for details.

Notes

- When you play back standard definition image quality (STD) movies on a 4:3 TV that is not compatible with the 16:9 signal, record movies with 4:3 aspect ratio. Touch **MENU** (MENU) → [Image Quality/Size] → [ Wide Mode] → [4:3] → **OK**.
- When the A/V connecting cable is used to output movies, movies are output with standard definition image quality (STD).

Tips

- If you connect your camcorder to the TV using more than one type of cable to output images, the order of priority of the TV input jacks is as follows:
HDMI → component → S VIDEO → video
- HDMI (High Definition Multimedia Interface) is an interface to send both video/audio signals. The HDMI OUT jack outputs high quality images and digital audio.

Deleting movies and photos

You can free media space by deleting movies and photos from memory card.

Notes

- You cannot restore images once they are deleted. Save important movies and photos in advance.
- Do not remove the battery pack or the AC Adaptor from your camcorder while deleting the images. It may damage the memory card.
- Do not eject the memory card while deleting images from the memory card.
- You cannot delete protected movies and photos. Undo the protection of the movies and photos to delete them, before you try to delete them.

Tips

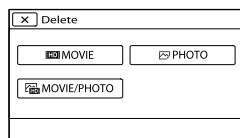
- You can delete the image using  on the playback screen.
- To delete all images recorded in the memory card, and recover all the recordable space of the media, format the media.
- Reduced-size images which enable you to view many images at the same time on an index screen are called “thumbnails.”

1 Press  (View Images) button (p. 37).

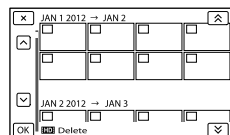
2 Touch **MENU** (MENU) → [Edit/Copy] → [Delete].

3 To select and delete movies, touch [Multiple Images] → [ MOVIE]/[ PHOTO]/[ MOVIE/PHOTO].

- When [**H**HD]/[**S**STD] Setting is set to [**S**STD: STD Quality], [**S**STD] appears instead of [**H**HD].



4 Touch and display the  mark on the movies or photos to be deleted.

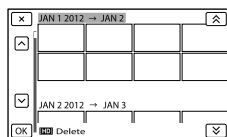


- Touch and hold the desired thumbnail so that you can confirm the image. Touch  to return to the previous screen.

5 Touch **OK** → **OK** → **OK**.

To delete all movies/photos in an event at one time

① In step 3, touch [All In Event].



② Touch  /  to select the desired event, then touch **OK**.

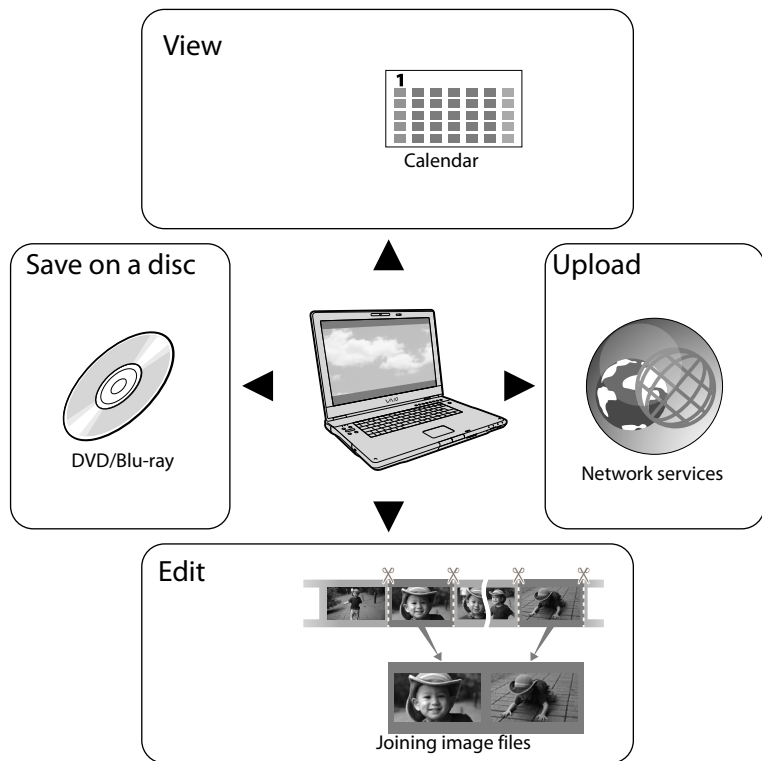
- Touch and hold the desired thumbnail so that you can confirm the image. Touch  to return to the previous screen.

③ Touch **OK** → **OK**.

Useful functions available if you connect the camcorder to a computer

For Windows

The software “PlayMemories Home” stored in the CD-ROM (supplied) includes functions that enable you to do more with the images recorded with the camcorder.



For Mac

“PlayMemories Home” is not compatible with Mac OS. If you play back images on a Mac, use the applications that are installed on your Mac.

For details, visit the following website.

<http://www.sony.co.jp/imsoft/Mac/>

Preparing a computer

Step 1 Checking the computer system

Windows

OS*1
Microsoft Windows XP SP3*2/Windows Vista SP2*3/Windows 7 SP1
CPU
PlayMemories Home: Intel Core Duo 1.66 GHz or faster, or Intel Core 2 Duo 1.66 GHz or faster (Intel Core 2 Duo 2.26 GHz or faster is required when processing FX or FH movies, and Intel Core 2 Duo 2.40 GHz or faster is required when processing PS movies.) However, Intel Pentium III 1 GHz or faster is sufficient for the following operations: – Importing the movies and photos to the computer – Creating a Blu-ray disc/AVCHD recording disc/DVD-video (Intel Core Duo 1.66 GHz or faster is required when creating a DVD video by converting high definition image quality (HD) to standard definition image quality (STD).) – Processing only the movies with standard definition image quality (STD) Image Data Converter: Pentium 4 or faster
Memory
PlayMemories Home: For Windows XP: 512 MB or more (1 GB or more is recommended.) However, 256 MB or more is sufficient for processing only the movies with standard definition image quality (STD). For Windows Vista/Windows 7: 1 GB or more Image Data Converter: 1GB or more
Hard disk
Disk volume required for installation: Approximately 500 MB (10 GB or more may be necessary when creating AVCHD recording discs. 50 GB maximum may be necessary when creating Blu-ray discs.)

Display
Minimum 1,024 dots × 768 dots
Others
USB port (this must be provided as standard, Hi-Speed USB (USB 2.0 compatible)), Blu-ray disc/DVD burner (CD-ROM drive is necessary for installation) Either NTFS or exFAT file system is recommended as the hard disk file system.

Mac

OS*1
USB Connection: Mac OS X (v10.3, v10.4, v10.5, v10.6, v10.7, v10.8) “Image Data Converter Ver.4.2”: Mac OS X (v10.5, v10.6 (Snow Leopard), v10.7 (Lion), v10.8 (Mountain Lion))
Image Data Converter Ver.4
CPU: Intel Core Solo/Core Duo/Core 2 Duo or faster Memory: 1 GB or more is recommended. Display: 1,024 dots × 768 dots or more

*1 Standard installation is required. Operation is not assured if the OS has been upgraded or in a multi-boot environment.

*2 64-bit editions and Starter (Edition) are not supported. Windows Image Mastering API (IMAPI) Ver.2.0 or newer is required to use disc creation function, etc.

*3 Starter (Edition) is not supported.

⚡ Notes

- Operation with all computer environments is not assured.

Step 2 Installing the supplied software “PlayMemories Home”

Install “PlayMemories Home” before connecting your camcorder to a computer. When you purchase this camcorder, install the supplied PlayMemories Home to the newest state.

Notes

- Install the supplied “PlayMemories Home” software, even if “PlayMemories Home” software has already been installed on your computer.
- If “PlayMemories Home” has already been installed on your computer, “PlayMemories Home” will overwrite it and will be installed. Some functions of “PlayMemories Home” may become unavailable.

1 Confirm that your camcorder is not connected to the computer.

2 Turn on the computer.

- Log on as an Administrator for installation.
- Close all applications running on the computer before installing the software.

3 Place the supplied CD-ROM in the disc drive of your computer.

The installation screen appears.

- If the screen does not appear, double-click [Start] → [Computer] (in Windows XP, [My Computer]) →  (PMHOME) → [Install.exe].

4 Click [Install].

5 Check that “PlayMemories Home” and “Image Data Converter” are selected, then follow the instructions on the computer screen to continue the installation.

6 Select the country or region.

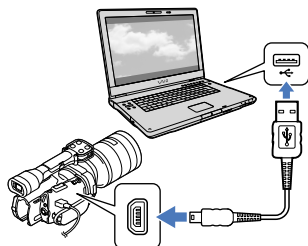
7 Select the language for the application to be installed, then proceed to the next screen.

8 Read the terms of the license agreement carefully. If you agree to the terms, change  to , and then click [Next] → [Install].

9 Follow the instructions that appear on the computer screen to continue the installation.

- You may be required to install some other applications included on the disc at the same time. If the installation display appears, follow the instructions that appear on the screen.
- When you are required to restart the computer, follow the instructions that appear on the screen and restart it.
- Connect the camcorder to the computer when you are instructed to do so.

10 Connect the camcorder to the computer using the USB cable, then touch [USB Connect] on the LCD screen of the camcorder.



11 When the installation is completed, remove the CD-ROM from the computer.

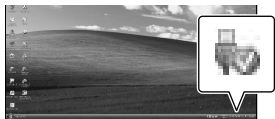
- Click  (PlayMemories Home icon) that appears on the desktop of the computer to start up the software.
-

Notes

- To create discs or use other functions on Windows XP, Image Mastering API v2.0 for Windows XP should be installed. If Image Mastering API v2.0 for Windows XP has not been installed yet, select it from required programs on the installation screen and install it following the procedures displayed. (The computer must be connected to the internet for the installation.) You may install Image Mastering API v2.0 for Windows XP in response to the message displayed when you try to start those functions.
- Operation is not guaranteed if you read or write video data from or to the camcorder using software other than the supplied “PlayMemories Home.” For the information on the compatibility of the software you are using, consult the manufacturer of the software.

To disconnect your camcorder from the computer

- Click the  icon at the bottom right of the desktop of the computer → [Safely remove USB Mass Storage Device].



- Touch [Cancel] → [Yes] on the camcorder screen.
- Disconnect the USB cable.
 - If you are using Windows 7, the  icon may not appear on the desktop of the computer. In this case, you can disconnect the camcorder

from your computer without following the procedures described above.

Notes

- Do not format the memory card of the camcorder using a computer. If you do this, the camcorder will not operate correctly.
- Do not insert AVCHD recording discs that have been created using the “PlayMemories Home” software to DVD players or recorders, as these devices do not support the AVCHD standard. If you do, you may not be able to remove the disc from these devices.
- This camcorder captures high definition footage in the AVCHD format. Using the enclosed PC software, high definition footage can be copied onto DVD media. However, DVD media containing AVCHD footage should not be used with DVD based players or recorders, as the DVD player/recorder may fail to eject the media and may erase its contents without warning.
- When you access the camcorder from the computer, use the supplied software “PlayMemories Home.” Do not modify the files or folders on the camcorder from the computer. The image files may be damaged or may not be played back.
- Operation is not guaranteed, if you operate the data on the camcorder from the computer.
- The camcorder automatically divides an image file that exceeds 2 GB or larger and saves the parts as separate files. All image files may be shown as separate files on a computer, however, the files will be handled properly by the import function of the camcorder or the “PlayMemories Home” software.
- Use the supplied “PlayMemories Home” software when you import long movies or edited images from the camcorder to a computer. If you use other software, the images may not be imported correctly.
- When you delete image files, follow the steps on page 44.
- You can create a Blu-ray disc by using a computer with a Blu-ray disc burner. Install the BD Add-on Software for “PlayMemories Home.”

Starting PlayMemories Home

The devices on which the created disc can be played back

Blu-ray discs

Blu-ray disc players such as a Sony Blu-ray disc player or a PlayStation®3

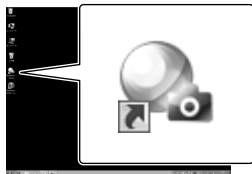
DVDs with high definition image quality (HD)

AVCHD format playback devices, such as a Sony Blu-ray disc player or a PlayStation®3

⚡ Notes

- The AVCHD recording disc can be played back only on AVCHD format compatible devices.
- Discs with high definition image quality (HD) images recorded should not be used in DVD players/recorders. Because DVD players/recorders are not compatible with the AVCHD format, DVD players/recorders may fail to eject the disc.
- Always maintain your PlayStation®3 to use the latest version of the PlayStation®3 system software. The PlayStation®3 may not be available in some countries/regions.

- 1 Double-click the “PlayMemories Home” short-cut icon on the computer screen.



The PlayMemories Home software starts up.

- 2 Double-click the “PlayMemories Home Help Guide” short-cut icon on the computer screen to see how to use “PlayMemories Home.”



⚡ Notes

- If the icon is not displayed on the computer screen, click [Start] → [All Programs] → [PlayMemories Home] → the desired item.

Using “Image Data Converter”

With “Image Data Converter” you can do the following:

- To edit images recorded in RAW format with various corrections, such as tone curve, and sharpness.
- To adjust images with white balance, exposure, and creative style, etc.
- To save the images displayed and edited on a computer.
- You can either save the image as RAW format or save it in the general file format.
- To display and compare RAW/JPEG images recorded with this camera.
- To rate the images on a scale of five.
- To set color labels.

To use “Image Data Converter,” refer to Help.

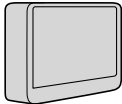
Click [Start] → [All Programs] → [Image Data Converter] → [Help] → [Image Data Converter Ver.4.2].

“Image Data Converter” support page
(English only)

<http://www.sony.co.jp/ids-se/>

Dubbing guide

You can select the method for saving high definition image quality (HD) movies using an external device.

	External devices	Connecting cable	Page
	External media device Saving images on an external media device with high definition image quality (HD).	USB Adaptor Cable VMC-UAM1 (sold separately)	52
	Hard disk recorder, etc. Saving images on a DVD disc with standard definition image quality (STD).	A/V connecting cable (supplied)	55

Movies that are recorded with standard definition image quality (STD)

Use the A/V connecting cable to connect the camcorder to an external device in which images are saved.

The types of media on which images are saved

Refer to “Selecting the recording mode” on page 35.

Saving images on an external media device

You can save movies and photos on an external media device (USB storage devices), such as an external hard disk drive. You can also play back images on the camcorder or another playback device.

⚡ Notes

- For this operation, you need the USB Adaptor Cable VMC-UAM1 (sold separately).
- The USB Adaptor Cable VMC-UAM1 may not be available in some countries/regions.
- Connect your camcorder to the wall outlet (wall socket) using the supplied AC Adaptor (p. 18).
- Refer to the instruction manual supplied with the external media device.

💡 Tips

- You can import images saved on the external media device to your computer by using the supplied software “PlayMemories Home.”

Functions available after saving images on an external media device

- playback of images through the camcorder (p. 54)
- importing images to “PlayMemories Home”

Devices that cannot be used as an external media device

- You cannot use the following devices as an external media device.
 - media devices with a capacity exceeding 2 TB
 - ordinary disc drive such as CD or DVD drive
 - media devices connected via a USB hub
 - media devices with built-in USB hub
 - card reader

⚡ Notes

- You may not be able to use external media devices with a code function.
- The FAT file system is available for your camcorder. If the storage medium of the external device was formatted for the NTFS file system, etc., format the external media device using the camcorder before use. The format screen appears when an external media device is connected to your camcorder. Make sure that

important data has not previously been saved on the external media device before you format it using the camcorder.

- Operation is not assured with every device satisfying requirements for operating.
- For details on available external media devices, go to the Sony support website in your country/region.

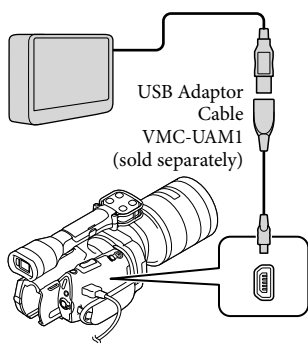
1 Connect the AC Adaptor and the power cord (mains lead) to the DC IN jack of your camcorder and the wall outlet (wall socket).

2 If the external medium device has the AC power cable, connect it to the wall outlet (wall socket).

3 Connect the USB Adaptor Cable to the external media device.

4 Connect the USB Adaptor Cable to the  (USB) jack of your camcorder.

Make sure not to disconnect the USB cable while [Preparing image database file. Please wait.] is displayed on the LCD screen. If [Repair Img. DB F.] is displayed on the camcorder screen, touch .



5 Connect the external media device to the camcorder and touch [Copy.] on the camcorder screen.

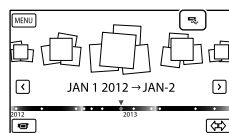
Movies and photos that are stored in the memory card and that have not yet been saved on external media device can be saved on the connected media device at this time.

- This operation is available only when there are newly recorded images.

6 After operation is completed, touch **OK** on the camcorder screen.

When connecting an external media device

The images saved in the external media device are displayed on the LCD screen. When an external media device is connected, the USB icon will appear on the Event View screen, etc.



You can make menu settings of the external media device such as deleting images. Touch **MENU** (MENU) → [Edit/Copy] on Event View.

To disconnect the external media device

- ① Touch **⏏** while the camcorder is in the playback standby mode ([Event View] or Event Index is displayed) of the external media device.
- ② Disconnect the USB Adaptor Cable.

⚡ Notes

- The number of scenes you can save on the external media device are as follows. However, even if the external media device has free space, you cannot save scenes exceeding the following number.
 - High definition image quality (HD) movies: Max. 3,999
 - Standard definition image quality (STD) movies: Max. 9,999
 - Photos: Max. 40,000
- The number of scenes may be smaller depending on the type of images recorded.

Saving desired movies and photos

You can save desired images in the camcorder to the external media device.

1 Connect the camcorder to the external media device and touch [Play without copying].

Event View of the external medium is displayed.

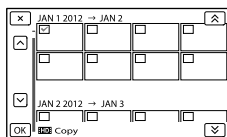
-
- 2 Touch **MENU** (MENU) → [Edit/Copy] → [Copy].
-

- 3 Follow the instructions that appear on the screen to select image selection methods and type of the image.

You cannot copy images from an external media device to the internal recording medium on the camcorder.

- 4 When you selected [Multiple Images], touch the image to be saved.

✓ appears.



- Press and hold the image down on the LCD screen to confirm the image. Touch **X** to return to the previous screen.
 - If you select [All In Event], select the event to copy with **▲** / **▼**. You cannot select multiple events.
-

- 5 Touch **OK** → **OK** → **OK** on the camcorder screen.
-

Playing back images in the external media device on the camcorder

- 1 Connect the camcorder to the

external media device and touch [Play without copying].

Event View of the external media device is displayed.

- 2 Select the image you want to view and play back the image (p. 37).

- You can also view images on a TV connected to your camcorder (p. 41).
 - You can play back the high definition image quality (HD) movies on your computer using [Player for AVCHD]. Start [Player for AVCHD], and select the drive where the external media device is connected with [Settings].
-

To perform [Direct Copy] manually

You can perform [Direct Copy] manually while the camcorder is connected to an external media device.

- ① Touch **MENU** (MENU) → [Edit/Copy] → [Direct Copy] on the [Event View] screen of the external media device.
- ② Touch [Copy images that have not been copied].
- ③ Touch **OK** → **OK**.

Notes

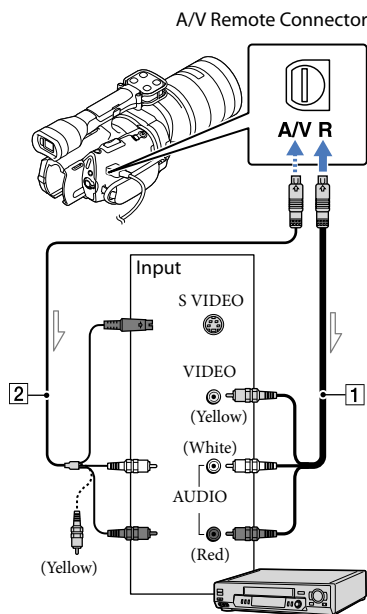
- If your camcorder does not recognize the external media device, try the following operations.
 - Reconnect the USB Adaptor Cable to your camcorder.
 - If the external media device has the AC power cord (mains lead), connect it to the wall outlet (wall socket).

Creating a standard definition image quality (STD) disc with a recorder, etc.

You can copy images played back on your camcorder to a disc or video cassette, by connecting your camcorder to a disc recorder, etc., with the A/V connecting cable. Connect the device in either way of **1** or **2**. Refer also to the instruction manuals supplied with the devices to be connected.

⚡ Notes

- Connect your camcorder to the wall outlet (wall socket) using the supplied AC Adaptor for this operation (p. 18).
- High definition image quality (HD) movies will be copied with standard definition image quality (STD).



➤ Signal flow

1 A/V connecting cable (supplied)

2 A/V connecting cable with S VIDEO (sold separately)

By using this cable, higher quality images can be produced than with an A/V connecting cable. Connect the white and red plug (left/right audio) and the S VIDEO plug (S VIDEO channel) of the A/V connecting cable with an S VIDEO cable. If you connect the S VIDEO plug only, you will hear no sound. The yellow plug (video) connection is not necessary.

1 Insert the recording media in the recording device.

- If your recording device has an input selector, set it to the input mode.

2 Connect your camcorder to the recording device (a disc recorder, etc.) with the A/V connecting cable **1** (supplied) or an A/V connecting cable with S VIDEO **2** (sold separately).

- Connect your camcorder to the input jacks of the recording device.

3 Start playback on your camcorder, and record it on the recording device.

- Refer to the instruction manuals supplied with your recording device for details.

4 When dubbing is finished, stop the recording device, and then your camcorder.

- When you connect a monaural device, connect the yellow plug of the A/V connecting cable to the video input jack, and the white (left channel) or the red (right channel) plug to the audio input jack on the device.

Notes

- Since copying is performed via analog data transfer, the image quality may deteriorate.
- You cannot copy images to recorders connected with an HDMI cable.
- To copy date/time information and camera data, touch **MENU** (MENU) → [Setup] → [] (Playback Settings) → [Data Code] → a desired setting → **OK**.
- When the screen size of display devices (TV, etc.) is 4:3, touch **MENU** (MENU) → [Setup] → [] (Connection) → [TV Type] → [4:3] → **OK**.

Customizing your camcorder

Using menus

You can enjoy using your camcorder more by making good use of menu operations. The camcorder has various menu items under each of 6 menu categories.

 **Shooting Mode (Items for selecting a shooting mode) → p. 58**

 **Camera/Mic (Items for customized shooting) → p. 58**

 **Image Quality/Size (Items for setting up image quality or size) → p. 59**

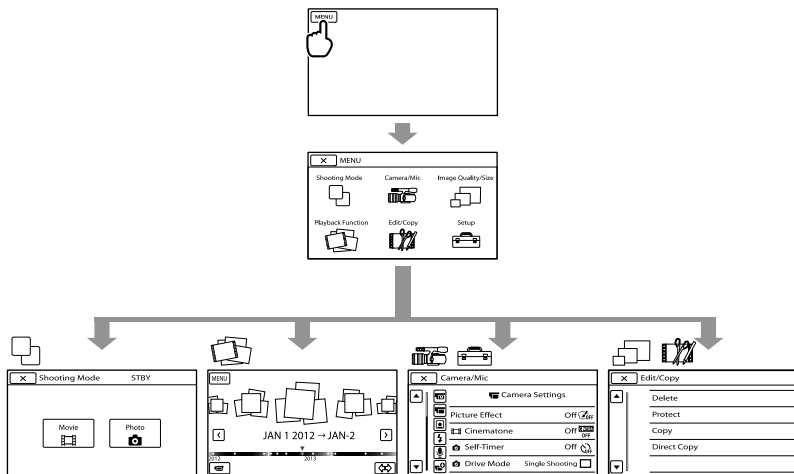
 **Playback Function (Items for playback) → p. 37**

 **Edit/Copy (Items for editing) → p. 59**

 **Setup (Other setup items) → p. 59**

Operating menus

Follow the procedures explained below to set the menu items.



The [Camera/Mic] and [Setup] menus have sub-categories. Touch the sub-category icon, and the screen changes to other sub-category menus.

Grayed out menu items or settings are not available.

 Notes

- You may not be able to set some menu items, depending on the recording or playback conditions.
- Touch  to finish setting the menu or to return to the previous menu screen.

Menu lists

Shooting Mode

- Movie Records movies.
- Photo..... Shoots photos.

Camera/Mic

(Manual Settings)

- Spot Meter/Fcs Adjusts the brightness and focus for the selected subject simultaneously.
- Spot Meter Adjusts the brightness of images to a subject you touch on the screen.
- Spot Focus Focuses on a subject you touch on the screen.
- Exposure..... Adjusts the brightness of movies and photos.
- AE Shift..... Adjusts the exposure. Touch  if the subject is white or the backlight is bright, or touch  if the subject is black or the light is dim.

(Camera Settings)

- Picture Effect..... Selects the desired effect filter for a more impressive and artistic effect.
-  Cinematone..... Adjusts the color of the movie to resemble the atmosphere of films when recording.
-  Self-Timer..... Sets the self-timer when your camcorder is in photo recording mode.
-  Drive Mode..... Sets continuous or bracket shooting, etc.
-  AF Mode..... Selects the focus method.
-  SteadyShot Sets the SteadyShot function when recording movies.
-  SteadyShot Sets the SteadyShot function when shooting photos.
- Auto Back Light..... Adjusts the exposure for backlit subjects automatically.
- MANUAL Button Assigns a function to the MANUAL button.
- APS-C Size Capture..... Changes the image size according to the attached lens.
- Phase Detection AF..... Speeds up autofocus automatically when a compatible lens is attached.

(Face)

- Face Detection Adjusts the image quality of the face(s) automatically.

(Flash)

- Flash Sets how the flash is activated.
- Flash Level Sets the brightness of flash.
- Red Eye Reduction..... Prevents redeye when shooting with flash.

(Microphone)

- Wind Noise Reduct..... Reduces the wind noise.
- Audio Mode Sets the recording sound format (5.1ch surround/2ch stereo).
- Audio Rec Level Adjusts the audio level when recording.

(Shooting Assist)

- Guide Frame..... Displays the frame to make sure the subject is horizontal or vertical.
- Zebra Displays a zebra pattern as a guide for adjusting brightness.
- Peaking Displays an image on the LCD screen with its outlines enhanced.
- Histogram Displays the Histogram.
- Camera Data Display.... Displays the value of iris, gain (ISO) and shutter speed.

- Audio Level Display Displays the audio level meter on the LCD screen.
- AF Micro Adjustment... Adjusts the focus for the attached lens.
- Digital Zoom Sets the digital zoom.
- Zoom Lever Sets the function assigned to the zoom lever.
- Zoom Speed Changes the zoom speed when the zoom lever is pressed.

Image Quality/Size

-  REC Mode Sets the mode to record movies. When recording fast moving subject, a high image quality is recommended.
-  Frame Rate Sets the frame rate to record movies.
-   Setting..... Sets image quality for recording, playback, or editing movies.
-  Wide Mode Sets the horizontal to vertical ratio when recording movies with standard definition image quality (STD).
-  Image Size Sets the photo size.
-  RAW/JPEG..... Selects the compression format of still images.

Playback Function Enables you to view recorded movies/photos (p. 37).

Edit/Copy

- Delete..... Deletes movies or photos.
- Protect Protects movies or photos to avoid deleting.
- Copy Selects and copies movies or photos to external media.
- Direct Copy Copies images stored on the recording medium to some type of external media.

Setup

Media Settings)

- Media Info Displays information on the recording media, such as free space.
- Format..... Deletes all data on the recording media.
- Repair Img. DB F..... Repairs the image database file on the recording media (p. 63).
- File Number..... Sets how to assign the file number.

Playback Settings)

- Data Code Sets the date and time.
- Volume..... Adjusts the volume of playback sound (p. 39).

Connection)

- TV Type Converts the signal depending on the TV connected (p. 41).
- Component Output Select this option when you connect your camcorder to a TV with the component input jack (p. 42).
- HDMI Resolution Selects the output image resolution when connecting your camcorder to a TV with an HDMI cable (sold separately).
- USB Connect Selects which type of media on the camcorder is to be used when the camcorder is connected to an external device via USB.
- USB Connect Setting ... Sets the connection mode when the camcorder is connected to a computer or a USB device.
- Disc Burn Saves images that have not yet been saved onto a disc.

(General Settings)

- Beep Sets whether the camcorder sounds operation beeps or not.
- LCD Brightness Adjusts the brightness of the LCD screen.
- VF Color Temp. Sets the color temperature of the viewfinder.
- VF/Panel Changes the display between the viewfinder and LCD screen.
- Display Setting..... Sets the duration that icons or indicators are displayed on the LCD screen.
- REC Lamp..... Turns off the recording lamp on the front of your camcorder.
- Shooting w/o Lens..... Sets whether or not the recording can be started when no lens is attached.
- Remote Ctrl..... Sets whether the Wireless Remote Commander is to be used or not.
- A. Shut Off..... Sets your camcorder to turn off automatically (p. 19).
- Language Setting Sets the display language (p. 26).
- 24p Mode * Shoots 24p movies on a PAL-based system.
- Calibration Calibrates the touch panel.
- Battery Info..... Displays the battery information.
- Version Displays the version of your camcorder and the lens.

(Clock Settings)

- Date & Time Setting Sets the [Date & Time], [Daylight Savings], [Summer Time], or [Date & Time Format] (p. 24).
- Area Setting Adjusts for a time difference without stopping the clock (p. 24).

* NEX-VG900E only

Getting detailed information from the “Handycam” Handbook

The “Handycam” Handbook is a user guide designed to be read on a computer screen. The “Handycam” Handbook is intended to be read when you want to know more about operating your camcorder.

- 1 To install the “Handycam” Handbook on a Windows computer, place the supplied CD-ROM in the disc drive of your computer.

The installation screen appears.

- If the screen does not appear, double- click [Start] → [Computer] (in Windows XP, [My Computer]) →  (PMHOME) → [install.exe].

- 2 Click [Handbook].

- 3 Click the desired language and the model name of your camcorder → [Install], and follow the on- screen instructions to install “Handycam” Handbook.

- The model name of your camcorder is printed on the bottom surface.

To view the “Handycam” Handbook, double-click the short-cut icon on the computer screen.



- When using a Mac, open the [Handbook]

– [GB] folder in the CD-ROM, then copy [Handbook.pdf].

- You need Adobe Reader to read “Handycam” Handbook. If it is not installed on your computer, you can download it from the Adobe Systems web page: <http://www.adobe.com/>
- Refer to “PlayMemories Home Help Guide” for details on the supplied software “PlayMemories Home” (p. 46).

? Troubleshooting

If you run into any problems using your camcorder, follow the steps below.

- 1 Check the list (p. 62 to 64), and inspect your camcorder.

- 2 Remove the power source, attach the power source again after about 1 minute, and turn the camcorder on.

- 3 Press RESET (p. 74) using a pointed object, and turn the camcorder on. If you press RESET, all settings, including the clock setting, are reset.

- 4 Contact your Sony dealer or local authorized Sony service facility.

- See the “Handycam” Handbook (p. 61) for details on the symptoms of your camcorder, and “PlayMemories Home Help Guide” (p. 49) on connecting your camcorder to a computer.

The power does not turn on.

- Attach a charged battery pack to the camcorder (p. 17).
- Connect the plug of the AC Adaptor to the wall outlet (wall socket) (p. 17).

The camcorder does not operate even when the power is set to on.

- It takes a few seconds for your camcorder to be ready to shoot after the power is turned on. This is not a malfunction.
- Disconnect the AC Adaptor from the wall outlet (wall socket) or remove the battery pack, then reconnect it after about 1 minute. If your camcorder still does not work, press RESET (p. 74) using a pointed object. (If you press RESET, all settings, including the clock setting, are reset.)
- The temperature of your camcorder is

extremely high. Turn off the camcorder and leave it for a while in a cool place.

- The temperature of your camcorder is extremely low. Leave the camcorder with the power turned on. If you still cannot operate your camcorder, turn off the camcorder and take it to a warm place. Leave the camcorder there for a while, then turn on the camcorder.

Your camcorder gets warm.

- Your camcorder may become warm during operation. This is not a malfunction.

The power abruptly turns off.

- Use the AC Adaptor (p. 18).
- Turn on the power again.
- Charge the battery pack (p. 17).

Pressing START/STOP or PHOTO does not record images.

- Press MODE to turn on the  (Movie) or  (Photo) lamp.
- Your camcorder is recording the image you have just shot on the memory card. You cannot make any new recordings during this period.
- The recording media is full. Delete unnecessary images (p. 44).
- Total number of movie scenes or photos has exceeded the recordable capacity of your camcorder (p. 65). Delete unnecessary images (p. 44).

The recording stops.

- The temperature of your camcorder is extremely high/low. Turn off your camcorder and leave it for a while in a cool/warm place.

“PlayMemories Home” cannot be installed.

- Check the computer environment or installation procedure required to install “PlayMemories Home” (p. 46).

"PlayMemories Home" does not work correctly.

- Quit "PlayMemories Home" and restart your computer.

The camcorder is not recognized by the computer.

- Disconnect devices from the USB jack of the computer other than the keyboard, mouse, and your camcorder.
- Disconnect the USB cable from the computer and your camcorder, and restart the computer, then connect the computer and your camcorder again in an orderly manner.

Self-diagnosis display/Warning indicators

If indicators appear on the LCD screen or viewfinder, check the following.

If the problem persists even after you have tried to fix a couple of times, contact your Sony dealer or local authorized Sony service facility. In this case, when you contact them, give them all the numbers of the error code beginning with C or E.

C:04:□□

- The battery pack is not an "InfoLITHIUM" battery pack V series. Use an "InfoLITHIUM" battery pack (V series) (p. 17).
- Connect the DC plug of the AC Adaptor to your camcorder securely (p. 17).

C:06:□□

- The battery pack temperature is high. Change the battery pack or place it in a cool place.

C:13:□□ / C:32:□□

- Remove the power source. Reconnect it and operate your camcorder again.

E:□□:□□

- Follow the steps from ② on page 62.



- Battery power is low.



- The battery pack temperature is high. Change the battery pack or place it in a cool place.



- No memory card is inserted (p. 30).
- When the indicator flashes, there is not enough free space for recording images. Delete unnecessary images (p. 44), or format the memory card after storing the images on other media.
- The Image Database File is damaged. Check the data base file by touching **MENU** (MENU) → [Setup] → [Repair Img. DB F.].



- The memory card is damaged. Format the memory card with your camcorder (p. 59).



- Incompatible memory card is inserted (p. 31).



- The memory card is write-protected.
- Access to the memory card was restricted on another device.



(Warning indicator pertaining to the external media device)

- The image database file may be damaged. Check the database file by touching **MENU** (MENU) → [Setup] → [Repair Img. DB F.]
- The external media device is damaged.



(Warning indicator pertaining to formatting of the external media device)

- The external media device is damaged.
- The external media device is not formatted correctly.



- The camcorder is unsteady. Hold the camcorder steady with both hands. However, note that the camera-shake warning indicator does not disappear.



- The memory card is full. Delete unnecessary images (p. 44).
- Photos cannot be recorded during processing. Wait for a while, then record.

Recording time of movies/number of recordable photos

“HD” stands for high definition image quality, and “STD” stands for standard image quality.

Expected time of recording and playback with each battery pack

Recording time

Approximate time available when you use a fully charged battery pack.

Battery pack	(unit: minute)			
	Continuous recording time		Typical recording time	
Image quality	HD	STD	HD	STD
NP-FV70 (supplied)	160 145	170 150	90 80	95 80
NP-FV100	325 295	340 305	180 160	185 165

- Top: When recording with the LCD screen
Bottom: When recording with viewfinder
- Each recording time is measured under the following conditions.
 - [REC Mode]: Standard **HQ** (default setting)
 - Using the mount adaptor LA-EA3 (supplied) and the SAL-2470Z lens (sold separately)
- Typical recording time shows the time when you repeat recording start/stop, switching the MODE lamp, and zooming.
- Times measured when using the camcorder at 25 °C (77 °F). 10 °C to 30 °C (50 °F to 86 °F) is recommended.
- The recording and playback time will be shorter when you use your camcorder in low temperatures.
- The recording and playback time will be shorter depending on the conditions under which you use your camcorder.

Playing time

Approximate time available when you use a

fully charged battery pack.

(unit: minute)

Battery pack		
Image quality	HD	STD
NP-FV70	375	415
(supplied)	315	345
NP-FV100	745	830
	625	680

- Top: When recording with the LCD screen
Bottom: When recording with viewfinder

Expected recording time of movies

High definition image quality (HD)

(unit: minute)

	16 GB	32 GB	64 GB
PS	75 (75)	150 (150)	305 (305)
FX	85 (85)	180 (180)	360 (360)
FH	120 (120)	245 (245)	490 (490)
HQ	210 (160)	430 (325)	865 (655)
LP	370 (300)	740 (610)	1490 (1225)

Standard definition image quality (STD)

(unit: minute)

	16 GB	32 GB	64 GB
HQ	220 (200)	445 (410)	895 (825)

Notes

- When using Sony memory card.
- The recordable time may vary depending on the recording and subject conditions and [REC Mode] and [Frame Rate] (p. 59).
- The number in () is the minimum recordable time.

Tips

- Your camcorder uses the VBR (Variable Bit Rate) format to automatically adjust image quality to suit the recording scene. This technology causes fluctuations in the recording time of the media. Movies containing quickly moving and complex images are recorded at a higher bit-rate, and this reduces the overall recording time.

Expected number of recordable photos

Full size

	JPEG	RAW	RAW & JPEG
16 GB	1600	600	435
32 GB	3200	1200	870
64 GB	6400	2400	1750

APS-C size

	JPEG	RAW	RAW & JPEG
16 GB	3250	1300	950
32 GB	6600	2600	1900
64 GB	13000	5200	3750

- When [Image Size] is set to [**3:2** 24.0M] (full size), [**3:2** 10.3M] (APS-C size).
- When using Sony memory card.
- The selected image size is effective when the (Photo) lamp is lit.
- The number of recordable photos of memory card shown is for the maximum image size of your camcorder. The actual number of recordable photos is displayed on the LCD screen during recording (p. 71).
- The number of recordable photos of memory card may vary depending on the recording conditions.

Tips

- You can also use memory card with a capacity of under 1 GB for recording photos.
- The following list shows the bit-rate, pixels and aspect ratio of each recording mode (movie + audio, etc.).

Precautions

- High definition image quality (HD):
 - PS: Max. 28 Mbps 1,920 pixels × 1,080 pixels/16:9
 - FX: Max. 24 Mbps 1,920 pixels × 1,080 pixels/16:9
 - FH: Approx. 17 Mbps (average) 1,920 pixels × 1,080 pixels/16:9
 - HQ: Approx. 9 Mbps (average) 1,440 pixels × 1,080 pixels/16:9
 - LP: Approx. 5 Mbps (average) 1,440 pixels × 1,080 pixels/16:9
- Standard definition image quality (STD):
 - HQ: Approx. 9 Mbps (average) 720 pixels × 480 pixels (NEX-VG900), 720 pixels × 576 pixels (NEX-VG900E)/16:9, 4:3
- The photo recording pixels and the aspect ratio.
 - Photo recording mode
 - Full size:
 - 6,000 dots × 4,000 dots/3:2
 - 6,000 dots × 3,376 dots/16:9
 - 3,936 dots × 2,624 dots/3:2
 - 3,936 dots × 2,216 dots/16:9
 - 2,640 dots × 1,760 dots/3:2
 - 2,640 dots × 1,488 dots/16:9
 - APS-C size:
 - 3,936 dots × 2,624 dots/3:2
 - 3,936 dots × 2,216 dots/16:9
 - 2,640 dots × 1,760 dots/3:2
 - 2,640 dots × 1,488 dots/16:9
 - 1,728 dots × 1,152 dots/3:2
 - 1,728 dots × 976 dots/16:9
 - Capturing a photo from a movie (NEX-VG900):
 - 1,920 dots × 1,080 dots/16:9
 - 640 dots × 360 dots/16:9
 - 640 dots × 480 dots/4:3

On use and care

- Do not use or store the camcorder and accessories in the following locations:
 - Anywhere extremely hot, cold or humid. Never leave them exposed to temperatures above 60 °C (140 °F), such as under direct sunlight, near heaters or in a car parked in the sun. They may malfunction or become deformed.
 - Near strong magnetic fields or mechanical vibration. The camcorder may malfunction.
 - Near strong radio waves or radiation. The camcorder may not be able to record properly.
 - Near AM receivers and video equipment. Noise may occur.
 - On a sandy beach or anywhere dusty. If sand or dust gets in your camcorder, it may malfunction. Sometimes this malfunction cannot be repaired.
 - Near windows or outdoors, where the LCD screen, the viewfinder or the lens may be exposed to direct sunlight. This damages the inside of the viewfinder or the LCD screen.
- Operate your camcorder on DC 6.8 V/7.2 V (battery pack) or DC 8.4 V (AC Adaptor).
- For DC or AC operation, use the accessories recommended in these operating instructions.
- Do not let your camcorder get wet, for example, from rain or sea water. If your camcorder gets wet, it may malfunction. Sometimes this malfunction cannot be repaired.
- If any solid object or liquid gets inside the casing, unplug your camcorder and have it checked by a Sony dealer before operating it any further.
- Avoid rough handling, disassembling, modifying, physical shock, or impact such as hammering, dropping or stepping on the product. Be particularly careful of the lens.
- Keep the camcorder turning off when you are not using your camcorder.
- Do not wrap your camcorder with a towel, for example, and operate it. Doing so might cause heat to build up inside.
- When disconnecting the power cord (mains lead), pull it by the plug and not the cord (lead).
- Do not damage the power cord (mains lead)

- such as by placing anything heavy on it.
- Do not use a deformed or damaged battery pack.
- Keep metal contacts clean.
- If the battery electrolytic liquid has leaked:
 - Consult your local authorized Sony service facility.
 - Wash off any liquid that may have contacted your skin.
 - If any liquid gets in your eyes, wash with plenty of water and consult a doctor.

When not using your camcorder for a long time

- To keep your camcorder in optimum state for a long time, turn it on and let it run by recording and playing back images about once a month.
- Use up the battery pack completely before storing it.

LCD screen

- Do not exert excessive pressure on the LCD screen, as it may cause damage.
- If your camcorder is used in a cold place, a residual image may appear on the LCD screen. This is not a malfunction.
- While using your camcorder, the back of the LCD screen may heat up. This is not a malfunction.

To clean the LCD screen

- If hand grease or hand cream remains on the screen, the coating comes off more easily. Wipe it early.
- The coating may be scratched if you wipe the screen with a tissue, etc.
- If fingerprints and dust get on the screen, it is recommended that you first remove the dust with a blower, etc., then use a soft cloth to remove the fingerprints.

On handling the casing

- If the casing is soiled, clean the camcorder body with a soft cloth lightly moistened with water, and then wipe the casing with a dry soft cloth.
- Avoid the following to avoid damage to the finish:
 - Using chemicals such as thinner, benzene, alcohol, chemical cloths, repellent, insecticide and sunscreen
 - Handling the camcorder with above substances on your hands
 - Leaving the casing in contact with rubber or vinyl objects for a long period of time

About care and storage of the lens

- Wipe the surface of the lens clean with a soft cloth in the following instances:
 - When there are fingerprints on the lens surface
 - In hot or humid locations
 - When the lens is exposed to salty air such as at the seaside
- Store in a well-ventilated location subject to little dirt or dust.
- To prevent mold, periodically clean the lens as described above.

On charging the pre-installed rechargeable battery

Your camcorder has a pre-installed rechargeable battery to retain the date, time, and other settings even when the camcorder is turned off. The pre-installed rechargeable battery is always charged while your camcorder is connected to the wall outlet (wall socket) via the AC Adaptor or while the battery pack is attached. The rechargeable battery will be fully discharged in about 3 months if you do not use your camcorder at all. Use your camcorder after charging the pre-installed rechargeable battery. However, even if the pre-installed rechargeable battery is not charged, the camcorder operation will not be affected as long as you are not recording the date.

Procedures

Connect your camcorder to a wall outlet (wall socket) using the supplied AC Adaptor, and leave it for more than 24 hours.

Note on disposal/transfer of memory card

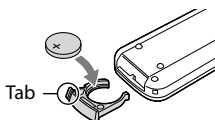
Even if you delete data in the memory card or format the memory card on your camcorder or a computer, you may not delete data from the

Specifications

memory card completely. When you give the memory card to somebody, it is recommended that you delete data completely using data deletion software on a computer. Also, when you dispose of the memory card, it is recommended that you destroy the actual body of the memory card.

To change the battery of the Wireless Remote Commander

- ① While pressing on the tab, inset your fingernail into the slit to pull out the battery case.
- ② Place a new battery with the + side facing up.
- ③ Insert the battery case back into the Wireless Remote Commander until it clicks.



WARNING

Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

- When the lithium battery becomes weak, the operating distance of the Wireless Remote Commander may shorten, or the Wireless Remote Commander may not function properly. In this case, replace the battery with a Sony CR2025 lithium battery. Use of another battery may present a risk of fire or explosion.

System

Signal format:

NEX-VG900:
NTSC color, EIA standards
HDTV 1080/60i, 1080/60p specification
NEX-VG900E:
PAL color, CCIR standards
HDTV 1080/50i, 1080/50p specification
NTSC color, EIA standards HDTV 1080/60i specification (24p recording mode only)

Movie recording format:

HD: MPEG-4 AVC/H.264 AVCHD format
Ver.2.0 compatible
STD: MPEG2-PS

Audio recording system:

Dolby Digital 2ch/5.1ch
Dolby Digital 5.1 Creator

Photo file format

DCF Ver.2.0 Compatible
Exif Ver.2.3 Compatible
MPF Baseline Compatible

Recording media (Movie/Photo)

“Memory Stick PRO Duo” media
SD card (Class 4 or faster)

Viewfinder:

Electronic viewfinder: Color
Screen size: 1.3 cm (0.5 type)
Effective pixel number: 2 359 296 dots
(3 072 × 768)

Image device: 36.1 mm × 24.3 mm (35 mm full size) CMOS sensor

Recording pixels (still 3:2 JPEG):
Max. 24.0 mega (6 000 × 4 000) pixels
Gross: Approx. 24 660 000 pixels
Effective (movie, 16:9):
Approx. 20 300 000 pixels
Effective (photo, 16:9):
Approx. 20 300 000 pixels
Effective (photo, 3:2):
Approx. 24 300 000 pixels

Color temperature: [Auto], [One Push], [Indoor] (3 200 K), [Outdoor] (5 600 K), manual (2 500 K - 9 900 K)

Minimum illumination

8 lx (lux) (in default setting, shutter speed 1/60 second (NEX-VG900) / 1/50 second (NEX-VG900E), gain: 30 dB, aperture F3.5)

Input/Output connectors

A/V Remote Connector: Component/video and audio output jack

HDMI OUT jack: HDMI mini connector

USB jack: mini-AB

NEX-VG900E: output only

Headphone jack: Stereo minijack (Ø 3.5 mm)

MIC input jack: Stereo minijack (Ø 3.5 mm)

LCD screen

Picture: 7.5 cm (3.0 type, aspect ratio 16:9)

Total number of pixels: 921 600 (1 920 × 480)

General

Power requirements: DC 6.8 V/7.2 V (battery pack) DC 8.4 V (AC Adaptor)

Average power consumption:

During camera recording using viewfinder at normal brightness:

HD: 5.2 W STD: 5.0 W

During camera recording using LCD screen at normal brightness:

HD: 4.7 W STD: 4.5 W

Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)

Storage temperature: -20 °C to + 60 °C (-4 °F to +140 °F)

Dimensions (approx.):

105 mm × 130 mm × 223 mm (4 1/4 in. × 5 1/8 in. × 8 7/8 in.) (w/h/d) including the projecting parts

105 mm × 130 mm × 227 mm (4 1/4 in. × 5 1/8 in. × 9 in.) (w/h/d) including the projecting parts, supplied battery pack (NP-FV70) and mount adaptor (LA-EA3)

Mass (approx.)

Camcorder body only:

Approx. 825 g (1 lb 13 oz)

When recording:

Approx. 1 030 g (2 lb 4 oz)

(With supplied battery pack (NP-FV70) and mount adaptor LA-EA3)

AC Adaptor AC-L200D

Power requirements: AC 100 V - 240 V,
50 Hz/60 Hz

Current consumption: 0.35 A - 0.18 A

Power consumption: 18 W

Output voltage: DC 8.4 V

Output current: 1.7 A

Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)

Storage temperature: -20 °C to + 60 °C (-4 °F to +140 °F)

Dimensions (approx.): 48 mm × 29 mm × 81 mm
(1 15/16 in. × 1 3/16 in. × 3 1/4 in.) (w/h/d)

excluding the projecting parts

Mass (approx.): 150 g (5.0 oz) excluding the power cord (mains lead)

Rechargeable battery pack NP-FV70

Maximum output voltage: DC 8.4 V

Output voltage: DC 6.8 V

Maximum charge voltage: DC 8.4 V

Maximum charge current: 3.0 A

Capacity

Typical: 14.0 Wh (2 060 mAh)

Minimum: 13.0 Wh (1 960 mAh)

Type: Li-ion

Mount adaptor (LA-EA3)

Dimensions (approx.):

76 mm × 69 mm × 35 mm (3 in. × 2 3/4 in. × 1 7/16 in.) (w/h/d)

Mass (approx.)

105 g (3.7 oz)

Design and specifications of your camcorder and accessories are subject to change without notice.

- Manufactured under license from Dolby Laboratories.

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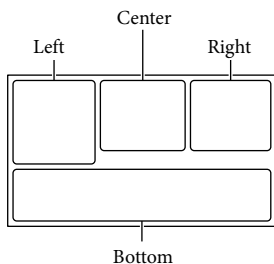
their respective companies. Furthermore, ™ and ® are not mentioned in each case in this manual.



Add further enjoyment with your PlayStation 3 by downloading the application for PlayStation 3 from PlayStation Store (where available.)

The application for PlayStation 3 requires PlayStation Network account and application download.
Accessible in areas where the PlayStation Store is available.

Screen indicators



Left

Indicator	Meaning
	MENU button
	Self-timer recording
	Wide Mode
	[Face Detection] set to [Off]
	Manual focus
	Focus Mode
	SteadyShot off
	Zebra
	Peaking
	Cinematone
	Destination
	Picture Effect

Center

Indicator	Meaning
	Recording status
	Processing
	Slide show set
	Warning
	Playback mode

Right

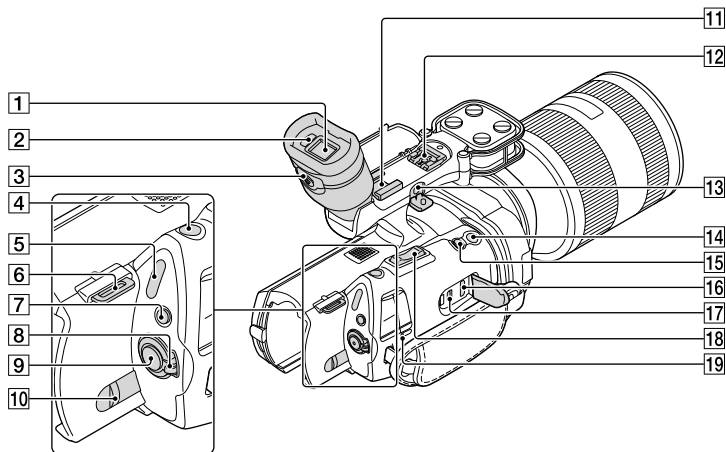
Indicator	Meaning
	Recording image quality (HD/STD), frame rate (60p/60i/24p), (50p/50i/25p) and recording mode (PS/FX/FH/HQ/LP)
	Remaining battery
	Digital Zoom
	Optical zoom
	Drive Mode
	RAW/JPEG
	Recording/playback/editing media
	Counter (hour:minute:second)
	Estimated recording remaining time
	Photo size
	Approximate number of recordable photos and photo size
	Playback folder
	Current playing movie or photo/Number of total recorded movies or photos
	An external media device is connected
	APS-C Size Capture

Bottom

Indicator	Meaning
	View Images button
	Wind Noise Reduct.
 5.1ch 2ch	Audio Mode
	Audio Rec Level
	Audio Level Display
EV	AE Shift
	Exposure Auto/ Exposure Manual
F1.4	IRIS
12dB	 Gain
ISO200	 ISO
4000	Shutter Speed
	Slide show button
 101-0005	Data file name
	Protected image
      	Flash
	Flash Level
	Red Eye Reduction
   	White Balance
5500K A3 G3	

- Indicators and their positions are approximate and may differ from what you actually see.
- Some indicators may not appear, depending on your camcorder model.

Parts and controls



- 1** Viewfinder (p. 28)
- 2** Eye sensor
- 3** Viewfinder lens adjustment lever (p. 28)
- 4** PHOTO button (p. 34)
- 5** (Movie)/ (Photo) lamps (p. 33)
- 6** Hook for shoulder strap
- 7** MODE button (p. 33)
- 8** ON/OFF (power) switch (p. 24)
- 9** START/STOP button (p. 33)
- 10** BATT (battery) release lever (p. 18)
- 11** Accessory shoe

Attach a gun microphone (sold separately), etc. If you attach accessories to the accessory shoe and multi interface shoe simultaneously, the accessories may collide with each other and be damaged.

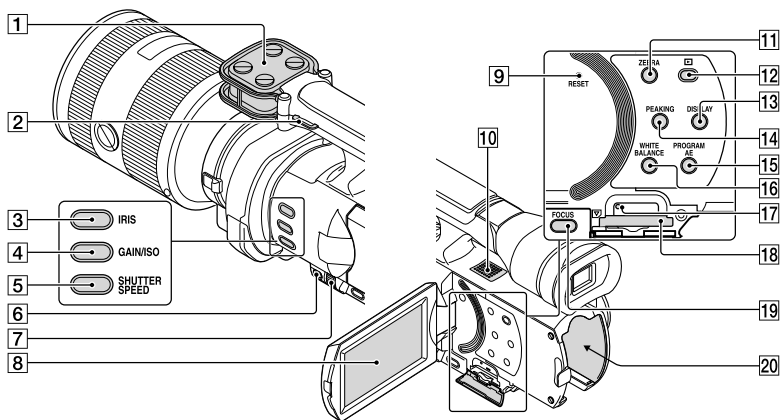
- 12** Multi interface shoe



For details on compatible accessories of the multi interface shoe, visit the Sony web site in your area, or consult your Sony dealer or local authorized Sony service facility.

Operations with other manufacture's accessories are not guaranteed.

- 13** MIC (PLUG IN POWER) jack
When an external microphone (sold separately) is connected, it takes precedence over the built in microphone, or a microphone attached to the multi interface shoe.
- 14** START/STOP button on the grip
Use this button when recording at a different angle.
- 15** EXPANDED FOCUS button
The EXPANDED FOCUS button has a tactile dot. Use as a guide for the operation.
- 16** HDMI OUT jack (p. 41)
- 17** (USB) jack (p. 52)
NEX-VG900E: output only
- 18** Zoom lever
- 19** CHG (charge) lamp (p. 17)



- 1** Microphone
- 2** Hook for shoulder strap
- 3** IRIS button
- 4** GAIN/ISO button
- 5** SHUTTER SPEED button
- 6** MANUAL button (p. 36)
- 7** MANUAL dial (p. 36)
- 8** LCD screen/Touch panel

If you rotate the LCD panel 180 degrees, you can close the LCD panel with the LCD screen facing out. This is convenient during playback operations.

9 RESET button

Press RESET using a pointed object.

Press RESET to initialize all the settings including the clock setting.

10 Speaker

11 ZEBRA button

12 (View Images) button (p. 37)

13 DISPLAY button (p. 27)

14 PEAKING button

15 PROGRAM AE button

16 WHITE BALANCE button

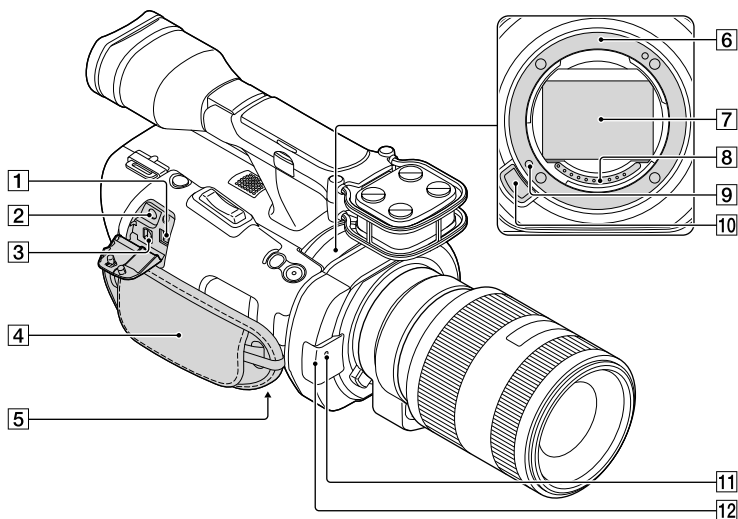
17 Memory card access lamp (p. 30)

While the lamp is lit or flashing, the camcorder is reading or writing data.

18 Memory card slot (p. 30)

19 FOCUS button

20 Battery terminal (p. 17)



1 DC IN jack (p. 17)

2 (headphones) jack

Use stereo minijack headphones.

3 A/V Remote Connector (p. 41)

This terminal is to interface your camcorder to another device. You can output still images, movies and sound to a connected TV, or control your camcorder when it is mounted on a remote control video tripod.

4 Grip belt (p. 32)

5 Tripod receptacle (p. 36)

6 Mount

7 Image sensor

Do not touch or dirty the image sensor.

8 Lens contacts

Do not touch or dirty the lens contacts.

9 Lens lock pin

10 Lens release button

11 Camera recording lamp

The lamp flashes when the remaining recording media capacity or battery power is low.

12 Remote sensor (p. 60)

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You will find the menu lists on pages 58 to 60.

Additional information on this product and answers to frequently asked questions can be found at our Customer Support Website.

<http://www.sony.net/>

Printed on 70% or more recycled paper
using VOC (Volatile Organic Compound)-
free vegetable oil based ink.

